# Mathematics

# Grade 5

DETROIT
PUBLIC SCHOOLS
COMMUNITY DISTRICT

Dear DPSCD Families,

The Office of Mathematics is partnering with families to support Distance Learning while students are home. As your child's first teacher, we empower you to utilize the resources provided to foster a deeper understanding of grade-level mathematics.

Students in grades K-8 will work from our core curriculum, Eureka Math, utilizing this Academic Packet supported by Knowledge on the Go recorded videos. The videos have a Eureka Math instructor presenting a lesson for students to engage in grade-level mathematics. The instructor will guide students to work through the lesson by completing problems simultaneously with your child and/or asking them to pause the video for independent solving and then check. As the instructor demonstrates sample problems in the Problem Set, Application Problems, Fluency Activities, Examples and/or Exercises, parents feel free to engage your child in this work. Ask students to show work and explain their answers. When appropriate have students add models or drawings to help them solve and record answers in complete sentences.

Daily lesson guidance can be found on the pages that follow. Each day has been designed to provide you access to materials from the Eureka Math Knowledge on the Go website https://gm.greatminds.org/en-us/knowledgeonthego . After you have accessed the site, click your child's grade level, and scroll down to find the desired lesson. The resources are found at the bottom of the page and we recommend the lessons be completed in order.

SCAN ME

Eureka Math is our core curriculum, but we also recognize it is necessary to differentiate mathematics instruction to meet all students' needs. Students took the **i-Ready** diagnostic earlier this year and it created a Learning Path for students to follow. Students work weekly on the goals set on the i-Ready Learning Path. After their core math lesson, if able, we ask that students continue to work on their Learning Path by logging on to www.clever.com and selecting the i-Ready icon. In addition, students may also access the i-Ready Teacher-Assigned Lessons which would be an enrichment to grade-level content and should be utilized if extension activities are needed.

SCAN ME

If one-on-one, live support is required, please feel free to call the **Homework Hotline** at 1-833-466-3978. Please check the Homework Hotline page for operating hours. We have DPSCD mathematics teachers standing by and are ready to assist.

SCAN ME

If students need additional help, and parents have internet access, please refer to the **Homework Helper** document and sign up for an account. Homework Helper provides step by step

explanations of how to work the Eureka Math problems. Also, provided on the Eureka Math Knowledge on the Go website is a plethora of **Additional Resources** that consists of Templates, Homework, Parent Tip Sheets, and more.

We appreciate your continued dedication, support and partnership with Detroit Public Schools Community District and with your assistance we can press forward with our priority: Outstanding Achievement. Be safe. Be well!

Tony R. Hawk

Deputy Executive Director of K-12 Mathematics

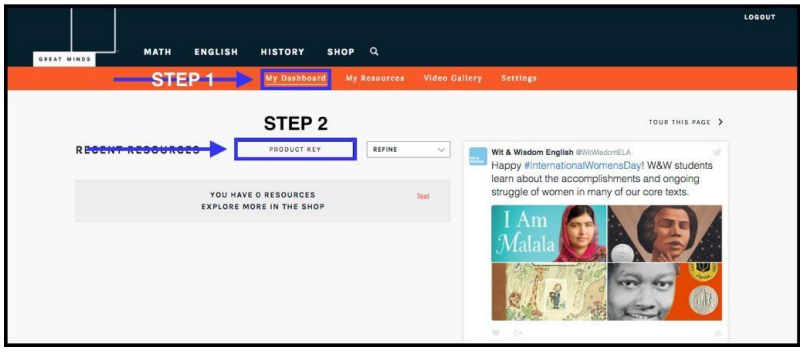
# ACCESSING HOMEWORK HELPER eBOOKS

STEP 1: CREATE AN ACCOUNT

Sign up for a free account at GreatMinds.org/store/signup.

STEP 2: ACCESS YOUR DASHBOARD

Once you have created an account at GreatMinds.org, you will be taken to your Dashboard.




After you have logged in you can also access your Dashboard by clicking “MY DASHBOARD” in the upper right-hand corner of the site.

STEP 3: ENTER YOUR PRODUCT KEY

In your Dashboard you will see several buttons, select “PRODUCT KEY” and enter **H00688525** to access your Homework Helper eBook.


STEP 4: ACCESS YOUR HOMEWORK HELPER eBOOK

After you’ve entered your Product Key, select a grade-level, and the Homework Helper eBook will be added to your Dashboard. Click “LAUNCH PRODUCT” to navigate into the eBook. Note: if you are viewing the Homework Helper eBooks on a mobile device or tablet, we recommend using landscape view.

Questions? Contact us at info@GreatMinds.org.

# Clever—How to access DPSCD Curriculum Applications through Clever.com

DETROIT PUBLIC SCHOOLS COMMUNITY DISTRICT
Students Rise. We All Rise.

1 Click on the Clever desktop shortcut or open Google Chrome and go to clever.com/in/dpscd

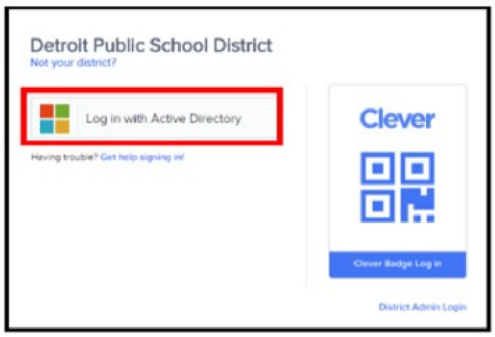
1 

OR Clever.com/in/dpscd

2 Click "Log in with Active Directory"

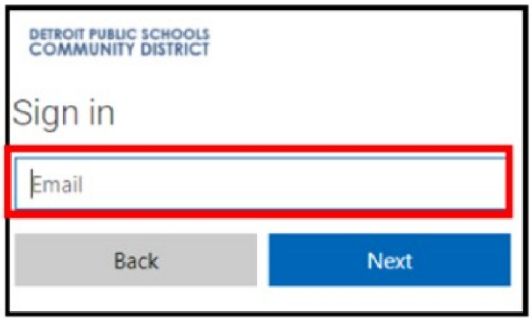
Teacher's will use the same credentials that they use to login to their email.

Student's will follow the following format listed below

2 


3 Enter student's username in the space identified. The username will consist of the students ID # with @thedps.org appended on.

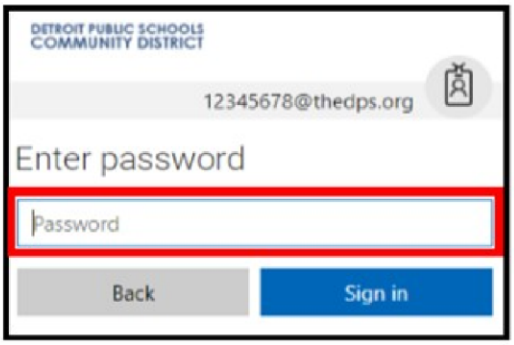
For example 12345678@thedps.org

3 

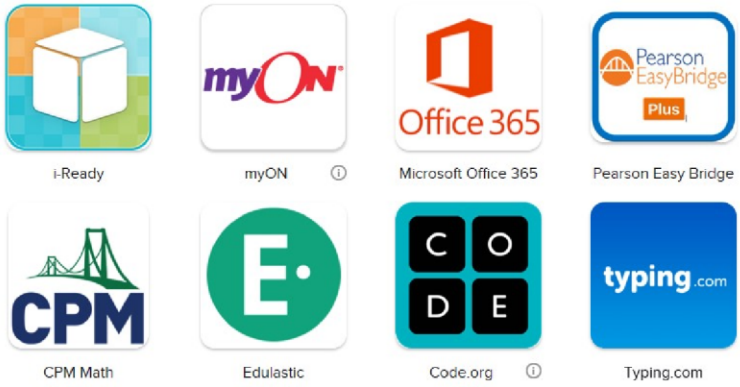

4 Enter the student's password. The password will consist of the following:

First letter of first name in upper case
First letter of last name in lower case
2 digit of their birth month
2 digit of their birth year
01 (male) or 02 (female)

For example: Jane Doe's birthday is May 13, 2004. Her password is Jd050402

4 


5 Click on the application you are interested in accessing

5 

# Grade 5 Mathematics WEEKLY DISTANCE LEARNING STUDENT SCHEDULE

| 4/14/20 to 4/17/20 Week 1 (4 days) | |
|---|---|
| **Directions:** | **Parents:** Assist students with accessing the "Knowledge on the Go" videos, Problem Sets in this packet, and i-Ready through the Clever app. Also, monitor student's progress while working on the videos and/or online lessons.<br>**Students:** Click or watch the "Knowledge on the Go" video each day and complete the daily Problem Set. Visit i-ready to continue your learning path and complete Teacher-Assigned lessons. |
| **Target Standard(s)** | 5.MD.C.3 \| 5.MD.C.3.a \| 5.MD.C.3.b \| 5.MD.C.4 \| 5.MD.C.5 \| 5.MD.C.5.a |
| **Module Topic** | Module 5: Addition and Multiplication with Volume and Area<br>Topic A Concepts of Volume |
| **Materials Needed:** | • Access to Knowledge on the Go Lesson Videos & Resources including Templates & Homework Helpers which provide guidance with worked examples for each lesson. Clever Access for i-Ready (see links and QR codes below)<br>• Paper, Pencil, Academic Packet including Problem Sets<br>SCAN ME Knowledge on the Go Videos<br>SCAN ME Clever.com<br>SCAN ME Additional Resources |

| | Daily Lesson (50 Minutes) | Extension (10-15 minutes) | Intervention (10 minutes) |
|---|---|---|---|
| **Day 1** | Knowledge on the Go Video for Module 5, Lesson 1<br>**Module 5, Problem Set 1 (English /Spanish)** | i-Ready "Teacher Assigned" Lesson clever.com | i-Ready "My Path" Lesson clever.com |
| **Day 2** | Knowledge on the Go Video for Module 5, Lesson 2<br>**Module 5, Problem Set 2 (English /Spanish)** | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 3** | Knowledge on the Go Video for Module 5, Lesson 3<br>**Module 5, Problem Set 3 (English /Spanish)** | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 4** | Knowledge on the Go Video for Module 5, Lesson 4<br>**Module 5, Problem Set 4 (English /Spanish)** | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |

**Click the Knowledge on the Go Lesson Materials link or scan the Knowledge on the Go QR Code in the Materials section. Then scroll down and click on the corresponding Module and Lesson. Problem sets are included in this academic packet**

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 1

| | |
|---|---|
| **Standard** | 5.MD.C.3.a \| 5.MD.C.4 |
| **Learning Target** | Explore volume by building with and counting unit cubes. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 1***.<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 5, Lesson 1*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 5, Lesson 1 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 1.* |
| **Extend** . | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 2

| | |
|---|---|
| **Standard** | 4.NF.B.3.b |
| **Learning Target** | Decompose fractions as a sum of unit fractions using tape diagrams. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 2***.<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 5, Lesson 2*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 5, Lesson 2 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 2.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. .Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 3

| | |
|---|---|
| **Standard** | 4.NF.B.3.b |
| **Learning Target** | Decompose non-unit fractions and represent them as a whole number times a unit fraction using tape diagrams. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 3***.<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 5, Lesson3*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 5, Lesson 3 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 3.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 4

| | |
|---|---|
| **Standard** | 4.NF.B.3.b |
| **Learning Target** | Represent and identify fractional parts of different wholes. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 4****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set for* ***Module 5, Lesson 4*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here: Module 5, Lesson 4 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 4.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Grade 5 Mathematics WEEKLY DISTANCE LEARNING STUDENT SCHEDULE

| 4/20/20 to 4/24/20 Week 2 (5days) | |
|---|---|
| **Directions:** | **Parents:** Assist students with accessing the "Knowledge on the Go" videos, Problem Sets in this packet, and i-Ready through the Clever app. Also, monitor student's progress while working on the videos and/or online lessons.<br>**Students:** Click or watch the "Knowledge on the Go" video each day and complete the daily Problem Set. Visit i-ready to continue your learning path and complete Teacher-Assigned lessons. |
| **Standard(s)** | 5.MD.C.5 \| 5.MD.C.5.a \| 5.MD.C.5.b \| 5.MD.C.5.c |
| **Module Topic** | Module 5: Addition and Multiplication with Volume and Area<br>Topic B: Volume and the Operations of Multiplication and Addition |
| **Materials Needed:** | • Access to Knowledge on the Go Lesson Videos & Resources including Templates & Homework Helpers which provide guidance with worked examples for each lesson. Clever Access for i-Ready (see links and QR codes below)<br>• Paper, Pencil, Academic Packet including Problem Sets<br>SCAN ME Knowledge on the Go Videos<br>SCAN ME Clever.com<br>SCAN ME Additional Resources |

| | Daily Lesson (50 Minutes) | Extension (10-15 minutes) | Intervention (10 minutes) |
|---|---|---|---|
| **Day 5** | Knowledge on the Go Video for Module 5, Lesson 5<br>**Module 5, Problem Set 5 (English /Spanish)**<br>**Homework Helper (English /Spanish)** | i-Ready "Teacher Assigned" Lesson clever.com | i-Ready "My Path" Lesson clever.com |
| **Day 6** | Knowledge on the Go Video for Module 5, Lesson 6<br>**Module 5, Problem Set 6 (English /Spanish)**<br>**Homework Helper (English /Spanish)** | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 7** | Knowledge on the Go Video for Module 5, Lesson 7<br>**Module 5, Problem Set 7 (English /Spanish)**<br>**Homework Helper (English /Spanish)** | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 8** | Knowledge on the Go Video for Module 5, Lesson 8<br>**Module 5, Problem Set 8 (English /Spanish)**<br>**Homework Helper (English /Spanish)** | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 9** | Knowledge on the Go Video for Module 5, Lesson 9<br>**Module 5, Problem Set 9 (English /Spanish)** | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 5

| | |
|---|---|
| **Standard** | 4.NF.B.4.a |
| **Learning Target** | Decompose unit fractions using area models to show equivalence. |
| **Launch** | ***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson5***.<br>SCAN ME<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | ***Recommended:*** *Students will complete the Problem Set for* ***Module 5, Lesson 5*** *from the "Knowledge on the Go" along with the instructor.*<br>SCAN ME<br>*These are included in this academic packet or can be accessed here: Module 5, Lesson 5 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 5.* |
| **Extend** | ***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready.<br>SCAN ME |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 6

| | |
|---|---|
| **Standard** | 4.NF.B.4.a |
| **Learning Target** | Decompose fractions using area models to show equivalence. |
| **Launch** | ***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 6****.*<br>SCAN ME Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | ***Recommended:*** *Students will complete the Problem Set for* ***Module 5, Lesson 6*** *from the "Knowledge on the Go" along with the instructor.*<br>SCAN ME *These are included in this academic packet or can be accessed here: Module 5, Lesson 6 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 6.* |
| **Extend** | ***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready.<br>SCAN ME |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 7

| | |
|---|---|
| **Standard** | 4.NF.A.1 |
| **Learning Target** | Use the area model and multiplication to show the equivalence of two fractions. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 7****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 5, Lesson 7*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 5, Lesson 7 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 7.* |
| **Extend** . | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 8

| | |
|---|---|
| **Standard** | 4.NF.A.1 |
| **Learning Target** | Use the area model and multiplication to show the equivalence of two fractions. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 8****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set for* ***Module 5, Lesson 8*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 5, Lesson 8 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 8.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 9

| | |
|---|---|
| **Standard** | 4.NF.A.1 |
| **Learning Target** | Use the area model and division to show the equivalence of two fractions. |
| **Launch** | ***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 9***.<br>SCAN ME<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | ***Recommended:*** *Students will complete the Problem Set for* ***Module 5, Lesson 9*** *from the "Knowledge on the Go" along with the instructor.*<br>SCAN ME<br>*These are included in this academic packet or can be accessed here: Module 5, Lesson 9 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 9.* |
| **Extend** | ***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready.<br>SCAN ME |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Grade 5 Mathematics WEEKLY DISTANCE LEARNING STUDENT SCHEDULE

| 4/27/20 to 5/1/20 Week 3 (5 days) | |
|---|---|
| **Directions:** | **Parents:** Assist students with accessing the "Knowledge on the Go" videos, Problem Sets in this packet, and i-Ready through the Clever app. Also, monitor student's progress while working on the videos and/or online lessons.<br>**Students:** Click or watch the "Knowledge on the Go" video each day and complete the daily Problem Set. Visit i-ready to continue your learning path and complete Teacher-Assigned lessons. |
| **Standard(s)** | 5.NF.B.4 \| 5.NF.B.4.b \| 5.NF.B.6 |
| **Module Topic** | Module 5: Addition and Multiplication with Volume and Area<br>Topic C: Area of Rectangular Figures with Fractional Side Length |
| **Materials Needed:** | • Access to Knowledge on the Go Lesson Videos & Resources including Templates & Homework Helpers which provide guidance with worked examples for each lesson. Clever Access for i-Ready (see links and QR codes below)<br>• Paper, Pencil, Academic Packet including Problem Sets<br>SCAN ME Knowledge on the Go Videos<br>SCAN ME Clever.com<br>SCAN ME Additional Resources |

| | Daily Lesson (50 Minutes) | Extension (10-15 minutes) | Intervention (10 minutes) |
|---|---|---|---|
| **Day 10** | Knowledge on the Go Lesson Materials for Module 5, Lesson 10 | i-Ready "Teacher Assigned" Lesson clever.com | i-Ready "My Path" Lesson clever.com |
| **Day 11** | Knowledge on the Go Lesson Materials for Module 5, Lesson 11 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 12** | Knowledge on the Go Lesson Materials for Module 5, Lesson 12 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 13** | Knowledge on the Go Lesson Materials for Module 5, Lesson 13 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 14** | Knowledge on the Go Lesson Materials for Module 5, Lesson 14 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |

**Click the Knowledge on the Go Lesson Materials link or scan the Knowledge on the Go QR Code in the Materials section. Then scroll down and click on the corresponding Module and Lesson. Problem sets are included in this academic packet**

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 10

| | |
|---|---|
| **Standard** | 5.NF.B.4 |
| **Learning Target** | Find the area of rectangles with whole-by-mixed and whole-by-fractional number side lengths by tiling, record by drawing, and relate to fraction multiplication. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson10****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 5, Lesson 10*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 5, Lesson 10 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 10.* |
| **Extend** . | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

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# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 11

| | |
|---|---|
| **Standard** | 5.NF.B.4 |
| **Learning Target** | Find the area of rectangles with mixed-by-mixed and fraction-by-fraction side lengths by tiling, record by drawing, and relate to fraction multiplication. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 11***.<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set for* ***Module 5, Lesson 11*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 5, Lesson 11 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson11.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
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## Lesson 12

| | |
|---|---|
| **Standard** | 5.NF.B.4 |
| **Learning Target** | Multiply mixed number factors, and relate to the distributive property and the area model. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 12****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 5, Lesson 12*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here: Module 5, Lesson 12 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 12.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 13

| | |
|---|---|
| **Standard** | 5.NF.B.4 |
| **Learning Target** | Multiply mixed number factors, and relate to the distributive property and the area model. |
| **Launch** | ***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 13****.*<br>SCAN ME<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | ***Recommended:*** *Students will complete the Problem Set for* ***Module 5, Lesson 13*** *from the "Knowledge on the Go" along with the instructor.*<br>SCAN ME<br>*These are included in this academic packet or can be accessed here: Module 5, Lesson 13 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson13.* |
| **Extend** . | ***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready.<br>SCAN ME |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

## Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

### Lesson 14

| | |
|---|---|
| **Standard** | 5.NF.B.6 |
| **Learning Target** | Solve real-world problems involving area of figures with fractional side lengths using visual models and/or equations. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 14***.<br><br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 5, Lesson 14*** *from the "Knowledge on the Go" along with the instructor.*<br><br>*These are included in this academic packet or can be accessed here:* Module 5, Lesson 14 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson14.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Grade 5 Mathematics WEEKLY DISTANCE LEARNING STUDENT SCHEDULE

| 5/4/20 to 5/8/20 Week 4 (5 days) | |
|---|---|
| **Directions:** | **Parents:** Assist students with accessing the "Knowledge on the Go" videos, Problem Sets in this packet, and i-Ready through the Clever app. Also, monitor student's progress while working on the videos and/or online lessons.<br>**Students:** Click or watch the "Knowledge on the Go" video each day and complete the daily Problem Set. Visit i-ready to continue your learning path and complete Teacher-Assigned lessons. |
| **Standard(s)** | 5.G.B.3 \| 5.G.B.4 |
| **Module Topic** | Module 5: Addition and Multiplication with Volume and Area<br>Topic D: Drawing, Analysis, and Classification of Two-Dimensional Shapes |
| **Materials Needed:** | • Access to Knowledge on the Go Lesson Videos & Resources including Templates & Homework Helpers which provide guidance with worked examples for each lesson. Clever Access for i-Ready (see links and QR codes below)<br>• Paper, Pencil, Academic Packet including Problem Sets<br>SCAN ME Knowledge on the Go Videos<br>SCAN ME Clever.com<br>SCAN ME Additional Resources |

| | Daily Lesson (50 Minutes) | Extension (10-15 minutes) | Intervention (10 minutes) |
|---|---|---|---|
| **Day 15** | Knowledge on the Go Video for Module 5, Lesson 15 | i-Ready "Teacher Assigned" Lesson clever.com | i-Ready "My Path" Lesson clever.com |
| **Day 16** | Knowledge on the Go Video for Module 5, Lesson 16 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 17** | Knowledge on the Go Video for Module 5, Lesson 17 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 18** | Knowledge on the Go Video for Module 5, Lesson 18 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 19** | Knowledge on the Go Video for Module 5, Lesson 19 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |

**Click the Knowledge on the Go Lesson Materials link or scan the Knowledge on the Go QR Code in the Materials section. Then scroll down and click on the corresponding Module and Lesson. Problem sets are included in this academic packet**

## Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

### Lesson 15

| | |
|---|---|
| **Standard** | 5.G.B.3 \| 5.G.B.4 |
| **Learning Target** | Solve real-world problems involving area of figures with fractional side lengths using visual models and/or equations. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 15****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 5, Lesson 15*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 5, Lesson 15 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson15.* |
| **Extend** . | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 16

| | |
|---|---|
| **Standard** | 5.G.B.3 \| 5.G.B.4 |
| **Learning Target** | Draw trapezoids to clarify their attributes, and define trapezoids based on those attributes. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 16****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set for* ***Module 5, Lesson 16*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here: Module 5, Lesson 16 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 16.* |
| **Extend** . | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

## Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

### Lesson 17

| | |
|---|---|
| **Standard** | 5.G.B.3 \| 5.G.B.4 |
| **Learning Target** | Draw parallelograms to clarify their attributes, and define parallelograms based on those attributes. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 17****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 5, Lesson 17*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 5, Lesson 17 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 17.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 18

| | |
|---|---|
| **Standard** | 5.G.B.3 \| 5.G.B.4 |
| **Learning Target** | Draw rectangles and rhombuses to clarify their attributes, and define rectangles and rhombuses based on those attributes. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 18****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 5, Lesson 18*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 5, Lesson 18 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 18.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 19

| | |
|---|---|
| **Standard** | 5.G.B.3 \| 5.G.B.4 |
| **Learning Target** | Draw kites and squares to clarify their attributes, and define kites and squares based on those attributes. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 19****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set for* ***Module 5, Lesson 19*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here: Module 5, Lesson 19 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 19.* |
| **Extend** . | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Grade 5 Mathematics WEEKLY DISTANCE LEARNING STUDENT SCHEDULE

| 5/11/20 to 5/15/20 Week 5 (5 days) | |
|---|---|
| **Directions:** | **Parents:** Assist students with accessing the "Knowledge on the Go" videos, Problem Sets in this packet, and i-Ready through the Clever app. Also, monitor student's progress while working on the videos and/or online lessons.<br>**Students:** Click or watch the "Knowledge on the Go" video each day and complete the daily Problem Set. Visit i-ready to continue your learning path and complete Teacher-Assigned lessons. |
| **Standard(s)** | 4.NF.B.3.a \| 4.NF.B.3.d 4.MD.B.4 \| 4.NF.A.2 \| 4.NF.B.3 |
| **Module Topic** | Module 5: Fractions Equivalence, Ordering and Operations<br>Module 6: Problem Solving with the Coordinate Plane |
| **Materials Needed:** | • Access to Knowledge on the Go Lesson Videos & Resources including Templates & Homework Helpers which provide guidance with worked examples for each lesson. Clever Access for i-Ready (see links and QR codes below)<br>• Paper, Pencil, Academic Packet including Problem Sets<br>SCAN ME Knowledge on the Go Videos<br>SCAN ME Clever.com<br>SCAN ME Additional Resources |

| | Daily Lesson (50 Minutes) | Extension (10-15 minutes) | Intervention (10 minutes) |
|---|---|---|---|
| **Day 20** | Knowledge on the Go Video for Module 5, Lesson 20 | i-Ready "Teacher Assigned" Lesson clever.com | i-Ready "My Path" Lesson clever.com |
| **Day 21** | Knowledge on the Go Video for Module 5, Lesson 21 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 22** | Knowledge on the Go Video for Module 6, Lesson 1 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 23** | Knowledge on the Go Video for Module 6, Lesson 2 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 24** | Knowledge on the Go Video for Module 6, Lesson 3 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |

**Click the Knowledge on the Go Lesson Materials link or scan the Knowledge on the Go QR Code in the Materials section. Then scroll down and click on the corresponding Module and Lesson. Problem sets are included in this academic packet**

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 20

| | |
|---|---|
| **Standard** | 5.G.B.3 \| 5.G.B.4 |
| **Learning Target** | Classify two-dimensional figures in a hierarchy based on properties. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 20***.<br><br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 5, Lesson 20*** *from the "Knowledge on the Go" along with the instructor.*<br><br>*These are included in this academic packet or can be accessed here:* Module 5, Lesson 20 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 20.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 21

| | |
|---|---|
| **Standard** | 5.G.B.3 \| 5.G.B.4 |
| **Learning Target** | Draw and identify varied two-dimensional figures from given attributes. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 5, Lesson 21***.<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 5, Lesson 21*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 5, Lesson 21 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 5, Lesson 21.* |
| **Extend** . | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 22

| | |
|---|---|
| **Standard** | 5.G.A.1 |
| **Learning Target** | Construct a coordinate system on a line. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 1***.<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set for* ***Module 6, Lesson 2*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here: Module 6, Lesson 1 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 1.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 23

| | |
|---|---|
| **Standard** | 5.G.A.1 |
| **Learning Target** | Construct a coordinate system on a plane. |
| **Launch** | ***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 2****.*<br>SCAN ME Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | ***Recommended:*** *Students will complete the Problem Set for* ***Module 6, Lesson 2*** *from the "Knowledge on the Go" along with the instructor.*<br>SCAN ME *These are included in this academic packet or can be accessed here: Module 6, Lesson 2 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 2.* |
| **Extend** . | ***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready.<br>SCAN ME |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

## Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

### Lesson 24

| | |
|---|---|
| **Standard** | 5.G.A.1 |
| **Learning Target** | Name points using coordinate pairs, and use the coordinate pairs to plot points. |
| **Launch** | SCAN ME ***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 3***. Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME ***Recommended:*** *Students will complete the Problem Set* for ***Module 6, Lesson 3*** *from the "Knowledge on the Go" along with the instructor. These are included in this academic packet or can be accessed here:* Module 6, Lesson 3 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 3.* |
| **Extend** . | SCAN ME ***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Grade 5 Mathematics WEEKLY DISTANCE LEARNING STUDENT SCHEDULE

| 5/18/20 to 5/22/20 Week 6 (5 days) | |
|---|---|
| **Directions:** | **Parents:** Assist students with accessing the "Knowledge on the Go" videos, Problem Sets in this packet, and i-Ready through the Clever app. Also, monitor student's progress while working on the videos and/or online lessons.<br>**Students:** Click or watch the "Knowledge on the Go" video each day and complete the daily Problem Set. Visit i-ready to continue your learning path and complete Teacher-Assigned lessons. |
| **Standard(s)** | 4.MD.B.4 \| 4.NF.A.2 \| 4.NF.B.3 |
| **Module Topic** | Module 6: Problem Solving with the Coordinate Plan<br>Topic A: Coordinate Systems |
| **Materials Needed:** | • Access to Knowledge on the Go Lesson Videos & Resources including Templates & Homework Helpers which provide guidance with worked examples for each lesson. Clever Access for i-Ready (see l below)<br>• Paper, Pencil, Academic Packet including Problem Sets<br>SCAN ME Knowledge on the Go Videos<br>SCAN ME Clever.com<br>SCAN ME Additional Resources |

| | Daily Lesson (50 Minutes) | Extension (10-15 minutes) | Intervention (10 minutes) |
|---|---|---|---|
| **Day 25** | Knowledge on the Go Video for Module 6, Lesson 4 | i-Ready "Teacher Assigned" Lesson clever.com | i-Ready "My Path" Lesson clever.com |
| **Day 26** | Knowledge on the Go Video for Module 6, Lesson 5 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 27** | Knowledge on the Go Video for Module 6, Lesson 6 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 28** | Knowledge on the Go Video for Module 6, Lesson 7 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 29** | Knowledge on the Go Video for Module 6, Lesson 8 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |

**Click the Knowledge on the Go Lesson Materials link or scan the Knowledge on the Go QR Code in the Materials section. Then scroll down and click on the corresponding Module and Lesson. Problem sets are included in this academic packet**

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 25

| | |
|---|---|
| **Standard** | 5.G.A.1 |
| **Learning Target** | Name points using coordinate pairs, and use the coordinate pairs to plot points. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 4****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 6, Lesson 4*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 6, Lesson 4 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 4.* |
| **Extend** . | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 26

| | |
|---|---|
| **Standard** | 5.G.A.1 |
| **Learning Target** | Investigate patterns in vertical and horizontal lines, and interpret points on the plane as distances from the axes. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 5****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 6, Lesson 5*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 6, Lesson 5 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 5.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 27

| | |
|---|---|
| **Standard** | 5.G.A.1 |
| **Learning Target** | Investigate patterns in vertical and horizontal lines, and interpret points on the plane as distances from the axes. |
| **Launch** | SCAN ME ***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 6***. Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME ***Recommended:*** *Students will complete the Problem Set* for ***Module 6, Lesson 6*** *from the "Knowledge on the Go" along with the instructor. These are included in this academic packet or can be accessed here:* Module 6, Lesson 6 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 6.* |
| **Extend** . | SCAN ME ***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 28

| | |
|---|---|
| **Standard** | 5.G.A.1 \| 5.OA.A.2 \| 5.OA.B.3 |
| **Learning Target** | Plot points, use them to draw lines in the plane, and describe patterns within the coordinate pairs. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 7****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set for* ***Module 6, Lesson 7*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here: Module 6, Lesson 7 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 7.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 29

| | |
|---|---|
| **Standard** | 5.G.A.1 \| 5.OA.A.2 \| 5.OA.B.3 |
| **Learning Target** | Generate a number pattern from a given rule and plot the points. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 8***.<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set for* ***Module 6, Lesson 8*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 6, Lesson 8 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 8.* |
| **Extend** . | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Grade 5 Mathematics WEEKLY DISTANCE LEARNING STUDENT SCHEDULE

| 5/18/20 to 5/22/20 Week 7 (4 days) | |
|---|---|
| **Directions:** | **Parents:** Assist students with accessing the "Knowledge on the Go" videos, Problem Sets in this packet, and i-Ready through the Clever app. Also, monitor student's progress while working on the videos and/or online lessons.<br>**Students:** Click or watch the "Knowledge on the Go" video each day and complete the daily Problem Set. Visit i-ready to continue your learning path and complete Teacher-Assigned lessons. |
| **Target Standard(s)** | 5.G.A.1 \| 5.OA.A.2 \| 5.OA.B.3 |
| **Module Topic** | Module 6: Problem Solving with the Coordinate Plane<br>Topic B: Patterns in the Coordinate Plane and Graphing |
| **Materials Needed:** | • Access to Knowledge on the Go Lesson Videos & Resources including Templates & Homework Helpers which provide guidance with worked examples for each lesson. Clever Access for i-Ready (see links and QR codes below)<br>• Paper, Pencil, Academic Packet including Problem Sets<br>SCAN ME Knowledge on the Go Videos<br>SCAN ME Clever.com<br>SCAN ME Additional Resources |

| | Daily Lesson (50 Minutes) | Extension (10-15 minutes) | Intervention (10 minutes) |
|---|---|---|---|
| **Day 30** | Knowledge on the Go Video for Module 6, Lesson 9 | i-Ready "Teacher Assigned" Lesson clever.com | i-Ready "My Path" Lesson clever.com |
| **Day 31** | Knowledge on the Go Video for Module 6, Lesson 10 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 32** | Knowledge on the Go Video for Module 6, Lesson 11 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 33** | Knowledge on the Go Video for Module 6, Lesson 12 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |

**Click the Knowledge on the Go Lesson Materials link or scan the Knowledge on the Go QR Code in the Materials section. Then scroll down and click on the corresponding Module and Lesson. Problem sets are included in this academic packet**

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 30

| | |
|---|---|
| **Standard** | 5.G.A.1 \| 5.OA.A.2 \| 5.OA.B.3 |
| **Learning Target** | Generate two number patterns from given rules, plot the points, and analyze the patterns. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 9***.<br><br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 6, Lesson 9*** *from the "Knowledge on the Go" along with the instructor.*<br><br>*These are included in this academic packet or can be accessed here:* Module 6, Lesson 9 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 9.* |
| **Extend**<br>. | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 31

| | |
|---|---|
| **Standard** | 5.G.A.1 \| 5.OA.A.2 \| 5.OA.B.3 |
| **Learning Target** | Compare the lines and patterns generated by addition rules and multiplication rules. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 10.***.<br><br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 6 Lesson 10*** *from the "Knowledge on the Go" along with the instructor.*<br><br>*These are included in this academic packet or can be accessed here:* Module 6, Lesson 10 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 10.* |
| **Extend** . | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 32

| | |
|---|---|
| **Standard** | 5.G.A.1 \| 5.OA.A.2 \| 5.OA.B.3 |
| **Learning Target** | Analyze number patterns created from mixed operations. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 11****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set for* ***Module 6, Lesson 11*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here: Module 6, Lesson 11 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 11.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 33

| | |
|---|---|
| **Standard** | 5.G.A.1 \| 5.OA.A.2 \| 5.OA.B.3 |
| **Learning Target** | Create a rule to generate a number pattern and plot the points. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 12****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 6, Lesson 12*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 6, Lesson 12 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 12.* |
| **Extend** . | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Grade 5 Mathematics WEEKLY DISTANCE LEARNING STUDENT SCHEDULE

| 6/1/20 to 6/5/20 Week 8 (5 days) | |
|---|---|
| **Directions:** | **Parents:** Assist students with accessing the "Knowledge on the Go" videos, Problem Sets in this packet, and i-Ready through the Clever app. Also, monitor student's progress while working on the videos and/or online lessons.<br>**Students:** Click or watch the "Knowledge on the Go" video each day and complete the daily Problem Set. Visit i-ready to continue your learning path and complete Teacher-Assigned lessons. |
| **Standard(s)** | 4.G.A.1 \| 4.G.A.3 \| 5.G.A.1 \| 5.G.A.2 |
| **Module Topic** | Module 6: Problem Solving with the Coordinate plane<br>Topic C: Drawing Figures in the Coordinate Plane |
| **Materials Needed:** | • Access to Knowledge on the Go Lesson Videos & Resources including Templates & Homework Helpers which provide guidance with worked examples for each lesson. Clever Access for i-Ready (see links and QR codes below)<br>• Paper, Pencil, Academic Packet including Problem Sets<br>SCAN ME Knowledge on the Go Videos<br>SCAN ME Clever.com<br>SCAN ME Additional Resources |

| | Daily Lesson (50 Minutes) | Extension (10-15 minutes) | Intervention (10 minutes) |
|---|---|---|---|
| **Day 34** | Knowledge on the Go Video for Module 6, Lesson 13 | i-Ready "Teacher Assigned" Lesson clever.com | i-Ready "My Path" Lesson clever.com |
| **Day 35** | Knowledge on the Go Video for Module 6, Lesson 14 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 36** | Knowledge on the Go Video for Module 6, Lesson 15 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 37** | Knowledge on the Go Video for Module 6, Lesson 16 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 38** | Knowledge on the Go Video for Module 6, Lesson 17 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |

**Click the Knowledge on the Go Lesson Materials link or scan the Knowledge on the Go QR Code in the Materials section. Then scroll down and click on the corresponding Module and Lesson. Problem sets are included in this academic packet**

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 34

| | |
|---|---|
| **Standard** | 4.G.A.1 \| 4.G.A.3 \| 5.G.A.1 \| 5.G.A.2 |
| **Learning Target** | Construct parallel line segments on a rectangular grid. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 13****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 6, Lesson 13*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 5, Lesson 34 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 13.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 35

| | |
|---|---|
| **Standard** | 4.G.A.1 \| 4.G.A.3 \| 5.G.A.1 \| 5.G.A.2 |
| **Learning Target** | Construct parallel line segments, and analyze relationships of the coordinate pairs. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 14****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 6 Lesson 14*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 6, Lesson 14 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 14.* |
| **Extend** . | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 36

| | |
|---|---|
| **Standard** | 4.G.A.1 \| 4.G.A.3 \| 5.G.A.1 \| 5.G.A.2 |
| **Learning Target** | Construct perpendicular line segments on a rectangular grid. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 15****.*<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 6, Lesson 15*** *from the "Knowledge on the Go" along with the instructor.*<br>*These are included in this academic packet or can be accessed here:* Module 6, Lesson 15 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 15.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 37

| | |
|---|---|
| **Standard** | 5.G.A.2 |
| **Learning Target** | Construct perpendicular line segments, and analyze relationships of the coordinate pairs. |
| **Launch** | ***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 16****.*<br>SCAN ME Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | ***Recommended:*** *Students will complete the Problem Set for* ***Module 6, Lesson 16*** *from the "Knowledge on the Go" along with the instructor.*<br>SCAN ME *These are included in this academic packet or can be accessed here: Module 6, Lesson 16 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 16.* |
| **Extend** . | ***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready.<br>SCAN ME |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 38

| | |
|---|---|
| **Standard** | 5.G.A.2 |
| **Learning Target** | Draw symmetric figures using distance and angle measure from the line of symmetry. |
| **Launch** | ***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 17****.*<br>SCAN ME<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | ***Recommended:*** *Students will complete the Problem Set* for ***Module 6, Lesson 17*** *from the "Knowledge on the Go"5along with the instructor.*<br>SCAN ME<br>*These are included in this academic packet or can be accessed here: Module 6, Lesson 17 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 17.* |
| **Extend** | ***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready.<br>SCAN ME |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Grade 5 Mathematics WEEKLY DISTANCE LEARNING STUDENT SCHEDULE

| 6/8/20 to 6/12/20 Week 9 (5 days) | |
|---|---|
| **Directions:** | **Parents:** Assist students with accessing the "Knowledge on the Go" videos, Problem Sets in this packet, and i-Ready through the Clever app. Also, monitor student's progress while working on the videos and/or online lessons.<br>**Students:** Click or watch the "Knowledge on the Go" video each day and complete the daily Problem Set. Visit i-ready to continue your learning path and complete Teacher-Assigned lessons. |
| **Standard(s)** | 5.G.A.2 \| 5.OA.B.3 |
| **Module Topic** | Module 6: Solving Problems with the Coordinate Plane<br>Topic D: Problem Solving in the Coordinate Plane |
| **Materials Needed:** | • Access to Knowledge on the Go Lesson Videos & Resources including Templates & Homework Helpers which provide guidance with worked examples for each lesson. Clever Access for i-Ready (see links and QR codes below)<br>• Paper, Pencil, Academic Packet including Problem Sets<br>SCAN ME Knowledge on the Go Videos<br>SCAN ME Clever.com<br>SCAN ME Additional Resources |

| | Daily Lesson (50 Minutes) | Extension (10-15 minutes) | Intervention (10 minutes) |
|---|---|---|---|
| **Day 39** | Knowledge on the Go Video for Module 6, Lesson 18 | i-Ready "Teacher Assigned" Lesson clever.com | i-Ready "My Path" Lesson clever.com |
| **Day 40** | Knowledge on the Go Video for Module 6, Lesson 19 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 41** | Knowledge on the Go Video for Module 6, Lesson 20 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 42** | Knowledge on the Go Video for Module 6, Lesson 21 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 43** | Knowledge on the Go Video for Module 6, Lesson 22 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |

**Click the Knowledge on the Go Lesson Materials link or scan the Knowledge on the Go QR Code in the Materials section. Then scroll down and click on the corresponding Module and Lesson. Problem sets are included in this academic packet**

## Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

### Lesson 39

| | |
|---|---|
| **Standard** | 5.G.A.2 \| 5.OA.B.3 |
| **Learning Target** | Draw symmetric figures on the coordinate plane. |
| **Launch** | ***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 18***<br>SCAN ME Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | ***Recommended:*** *Students will complete the Problem Set* for ***Module 6, Lesson 18*** *from the "Knowledge on the Go" along with the instructor.*<br>SCAN ME *These are included in this academic packet or can be accessed here:* Module 6, Lesson 18 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 18.* |
| **Extend** . | ***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready.<br>SCAN ME |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

## Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

### Lesson 40

| | |
|---|---|
| **Standard** | 5.G.A.2 \| 5.OA.B.3 |
| **Learning Target** | Plot data on line graphs and analyze trends. |
| **Launch** | ***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson19****.*<br>SCAN ME<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | ***Recommended:*** *Students will complete the Problem Set for* ***Module 6, Lesson 19*** *from the "Knowledge on the Go" along with the instructor.*<br>SCAN ME<br>*These are included in this academic packet or can be accessed here: Module 6, Lesson 19 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 19.* |
| **Extend** . | ***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready.<br>SCAN ME |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 41

| | |
|---|---|
| **Standard** | 5.G.A.2 \| 5.OA.B.3 |
| **Learning Target** | Use coordinate systems to solve real world problems. |
| **Launch** | ***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 20****.*<br>SCAN ME<br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | ***Recommended:*** *Students will complete the Problem Set* for ***Module 6, Lesson 20*** *from the "Knowledge on the Go" along with the instructor.*<br>SCAN ME<br>*These are included in this academic packet or can be accessed here:* Module 6, Lesson 20 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 20.* |
| **Extend** | ***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready.<br>SCAN ME |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 42

| | |
|---|---|
| **Standard** | 5.G.A.2 \| 5.OA.B.3 |
| **Learning Target** | Make sense of complex, multi-step problems, and persevere in solving them. Share and critique peer solutions. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 21***.<br><br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set for* ***Module 6, Lesson 21*** *from the "Knowledge on the Go" along with the instructor.*<br><br>*These are included in this academic packet or can be accessed here:* Module 6, Lesson 1 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 21.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 43

| | |
|---|---|
| **Standard** | 5.G.A.2 \| 5.OA.B.3 |
| **Learning Target** | Make sense of complex, multi-step problems, and persevere in solving them. Share and critique peer solutions. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 22***.<br><br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 6, Lesson 22*** *from the "Knowledge on the Go" along with the instructor.*<br><br>*These are included in this academic packet or can be accessed here:* Module 6, Lesson 2 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 22.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Grade 5 Mathematics WEEKLY DISTANCE LEARNING STUDENT SCHEDULE

| 6/15/20 to 6/19/20 Week 10 (5 days) | |
|---|---|
| **Directions:** | **Parents:** Assist students with accessing the "Knowledge on the Go" videos, Problem Sets in this packet, and i-Ready through the Clever app. Also, monitor student's progress while working on the videos and/or online lessons.<br>**Students:** Click or watch the "Knowledge on the Go" video each day and complete the daily Problem Set. Visit i-ready to continue your learning path and complete Teacher-Assigned lessons. |
| **Standard(s)** | |
| **Module Topic** | Module 6: Solving Problems with the Coordinate Plane<br>Topic E: Multi-Step Word Problems |
| **Materials Needed:** * | • Access to Knowledge on the Go Lesson Videos & Resources including Templates & Homework Helpers which provide guidance with worked examples for each lesson. Clever Access for i-Ready (see below)<br>• Paper, Pencil, Academic Packet including Problem Sets<br>SCAN ME Knowledge on the Go Videos<br>SCAN ME Clever.com<br>SCAN ME Additional Resources |

| | Daily Lesson (50 Minutes) | Extension (10-15 minutes) | Intervention (10 minutes) |
|---|---|---|---|
| **Day 44** | Knowledge on the Go Video for Module 6, Lesson 23 | i-Ready "Teacher Assigned" Lesson clever.com | i-Ready "My Path" Lesson clever.com |
| **Day 45** | Knowledge on the Go Video for Module 6, Lesson 24 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 46** | Knowledge on the Go Video for Module 6, Lesson 25 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |
| **Day 47** | Knowledge on the Go Video for Module 6, Lesson 26 | i-Ready "Teacher Assigned" Lesson | i-Ready "My Path" Lesson |

**Click the Knowledge on the Go Lesson Materials link or scan the Knowledge on the Go QR Code in the Materials section. Then scroll down and click on the corresponding Module and Lesson. Problem sets are included in this academic packet**

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 44

| | |
|---|---|
| **Standard** | |
| **Learning Target** | Make sense of complex, multi-step problems, and persevere in solving them. Share and critique peer solutions. |
| **Launch** | SCAN ME ***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 23***.<br><br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME ***Recommended:*** *Students will complete the Problem Set* for ***Module 6, Lesson 23*** *from the "Knowledge on the Go" along with the instructor. These are included in this academic packet or can be accessed here:* Module 6, Lesson 23 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 23.* |
| **Extend** . | SCAN ME ***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 45

| | |
|---|---|
| **Standard** | |
| **Learning Target** | Make sense of complex, multi-step problems, and persevere in solving them. Share and critique peer solutions. |
| **Launch** | SCAN ME ***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 24***.<br><br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME ***Recommended:*** *Students will complete the Problem Set* for ***Module 6, Lesson 24*** *from the "Knowledge on the Go" along with the instructor.*<br><br>*These are included in this academic packet or can be accessed here:* Module 6, Lesson 24 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 24.* |
| **Extend** | SCAN ME ***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 46

| | |
|---|---|
| **Standard** | |
| **Learning Target** | Make sense of complex, multi-step problems, and persevere in solving them. Share and critique peer solutions. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 25***.<br><br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set* for ***Module 6, Lesson 25*** *from the "Knowledge on the Go" along with the instructor.*<br><br>*These are included in this academic packet or can be accessed here:* Module 6, Lesson 25 Problem Set |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 25.* |
| **Extend** . | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

# Daily Fluency Practice

**Mathematical Fluencies:**
In Grade 5, students are expected to multiply multi-digit numbers. This is a great time to practice these skills.

## Lesson 47

| | |
|---|---|
| **Standard** | |
| **Learning Target** | Make sense of complex, multi-step problems, and persevere in solving them. Share and critique peer solutions. |
| **Launch** | SCAN ME<br>***Recommended***: Students will *view the "Knowledge on the Go" video for* ***Module 6, Lesson 26***.<br><br>Scan the Knowledge on the Go QR Code or Click the Link to access the video. We encourage parents to assist students with accessing and engaging with the "Knowledge on the Go" videos. |
| **Guided Practice** | SCAN ME<br>***Recommended:*** *Students will complete the Problem Set for* ***Module 6, Lesson 26*** *from the "Knowledge on the Go" along with the instructor.*<br><br>*These are included in this academic packet or can be accessed here: Module 6, Lesson 26 Problem Set* |
| **Closing** | *Students will reflect and share their learning from Module 6, Lesson 26.* |
| **Extend** | SCAN ME<br>***Recommended:*** Students will complete the "Teacher Assigned" lesson in i-Ready. Visit Clever.com to access i-Ready. |
| **Intervention** | ***Recommended****:* Students will work on their individual Learning Path (My Path) in i-Ready. Visit Clever.com to access i-Ready. |

Learn

# Eureka Math®

## Grade 5
## Module 5

**Published by Great Minds®.**



Printed in the U.S.A.
This book may be purchased from the publisher at eureka-math.org.
10 9 8 7 6 5 4 3 2 1

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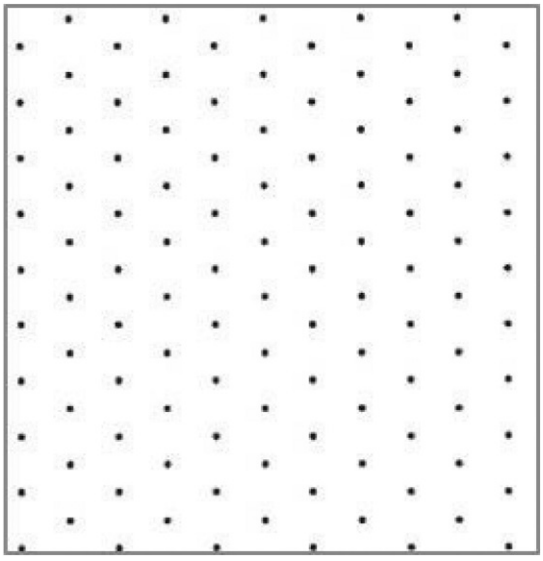
G5-M5-L-05.2018

Jackie and Ron both have 12 centimeter cubes. Jackie builds a tower 6 cubes high and 2 cubes wide. Ron builds one 6 cubes long and 2 cubes wide.

Jackie says her structure has the greater volume because it is taller. Ron says that the structures have the same volume.

Who is correct? Draw a picture to explain how you know. Use grid paper if you wish.

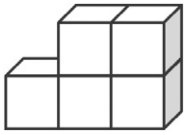


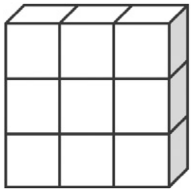
**Read** **Draw** **Write**

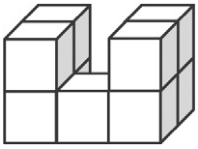
Name _____ Date _____

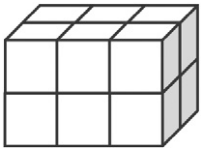
1. Use your centimeter cubes to build the figures pictured below on centimeter grid paper. Find the total volume of each figure you built, and explain how you counted the cubic units. Be sure to include units.

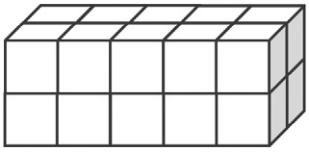
A. 

B. 

C. 

D. 

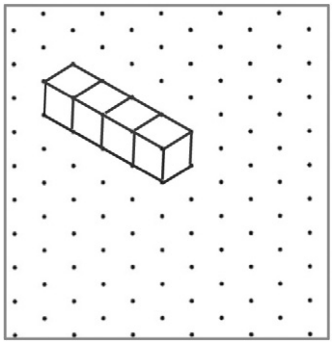
E. 

F. 

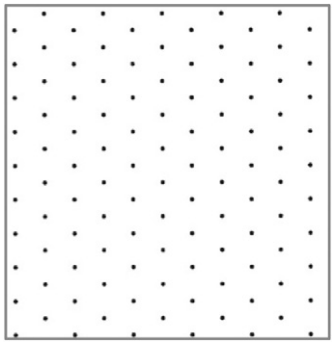
| Figure | Volume | Explanation |
|---|---|---|
| A | | |
| B | | |
| C | | |
| D | | |
| E | | |
| F | | |

2. Build 2 different structures with the following volumes using your unit cubes. Then, draw one of the figures on the dot paper. One example has been drawn for you.

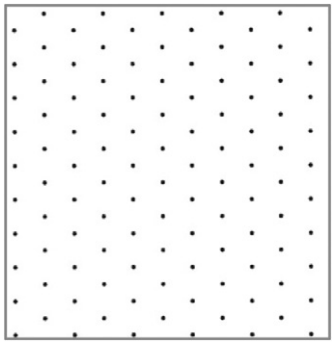
a. 4 cubic units



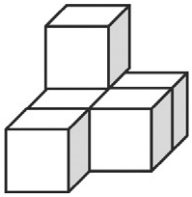
b. 7 cubic units



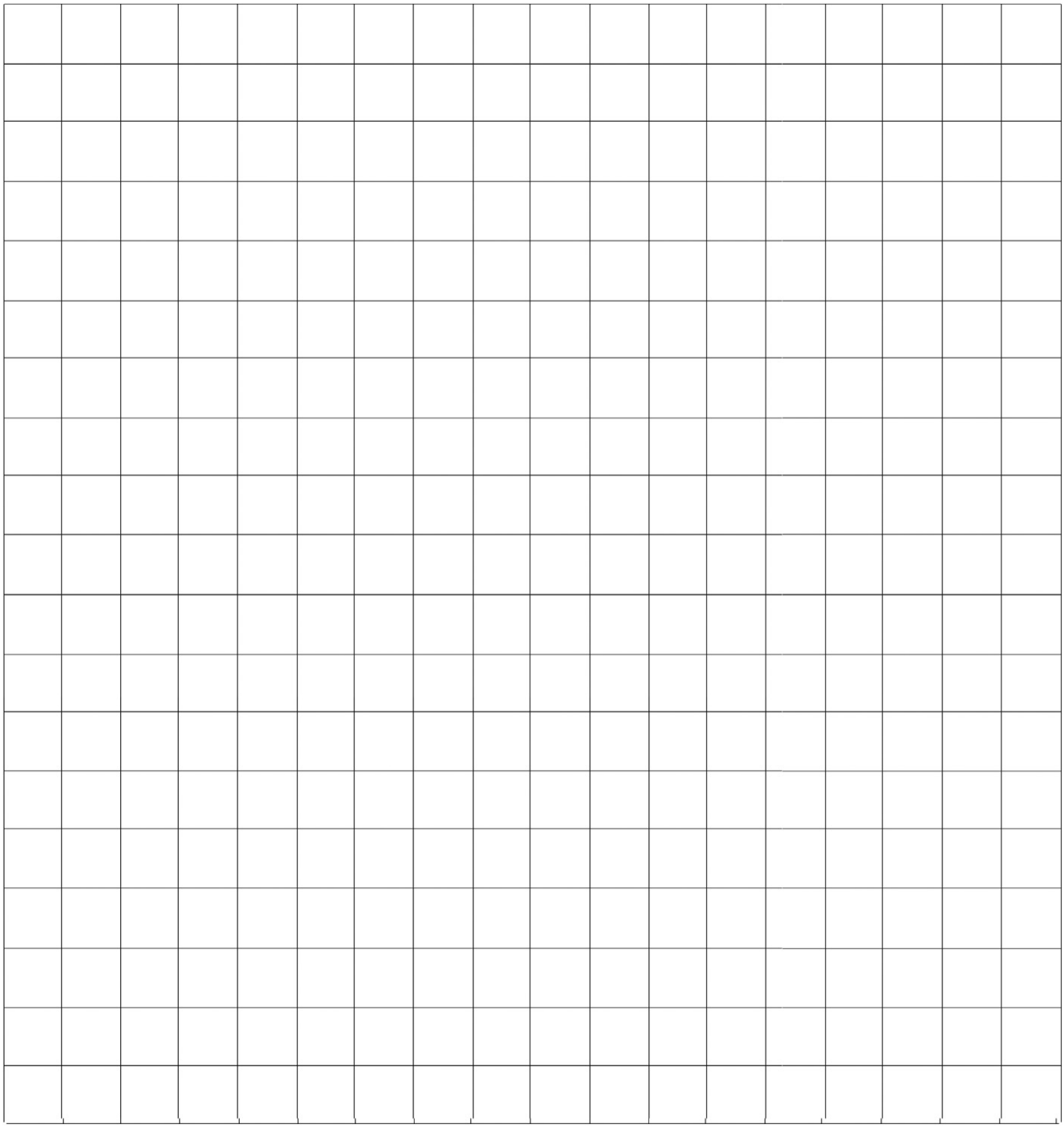
c. 8 cubic units



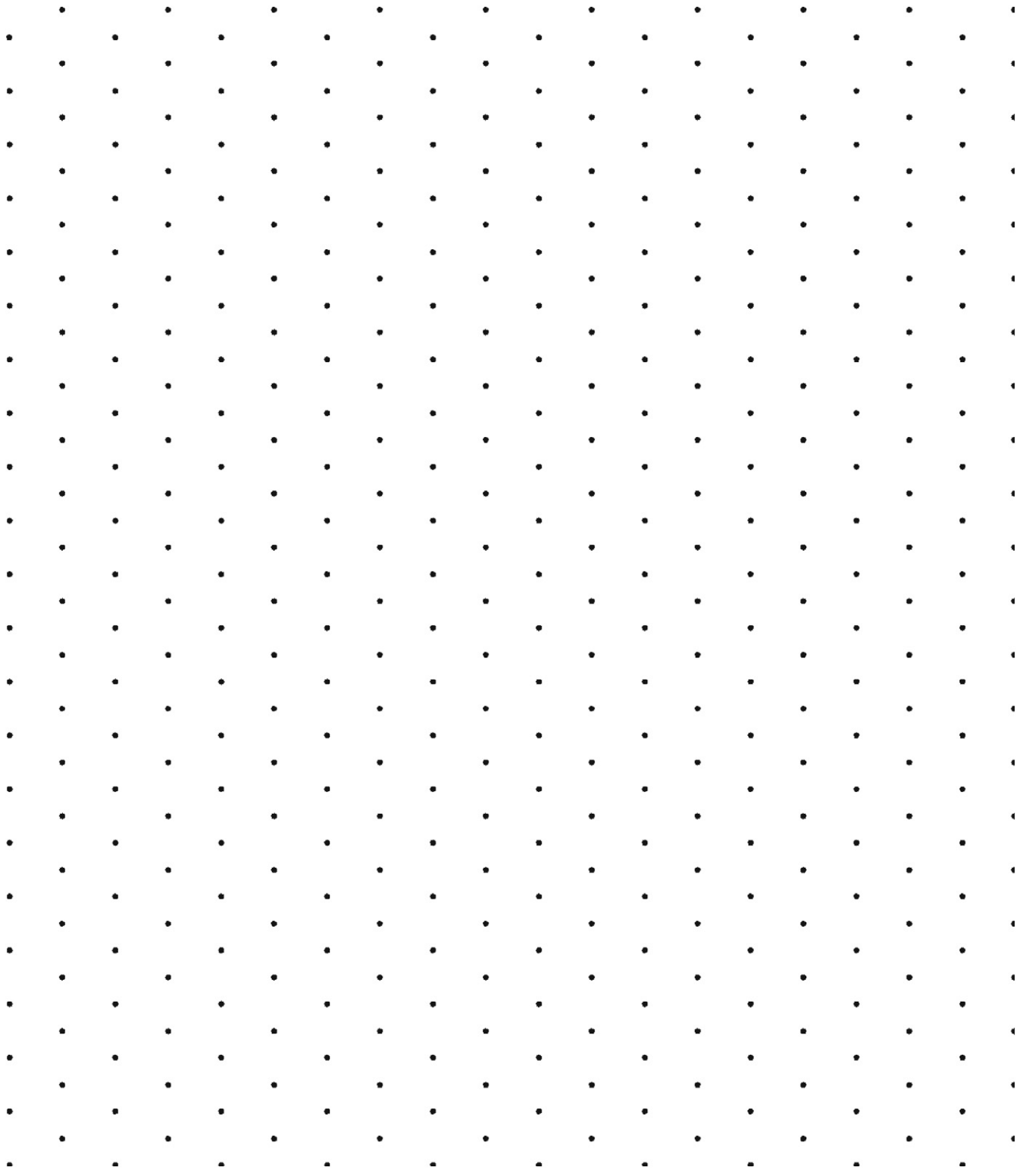
3. Joyce says that the figure below, made of 1 cm cubes, has a volume of 5 cubic centimeters.
   a. Explain her mistake.



   b. Imagine if Joyce adds to the second layer so the cubes completely cover the first layer in the figure above. What would be the volume of the new structure? Explain how you know.

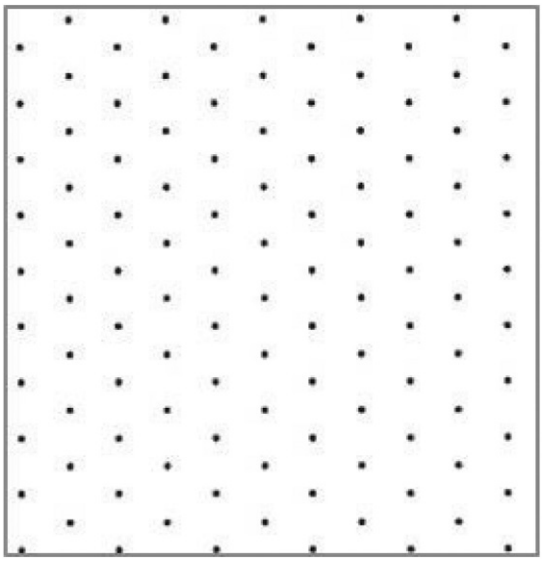


centimeter grid paper



isometric dot paper

Mike uses 12 centimeter cubes to build structures. Use centimeter cubes to build at least 3 different structures with the same volume as Mike's. Record one of your structures on dot paper.

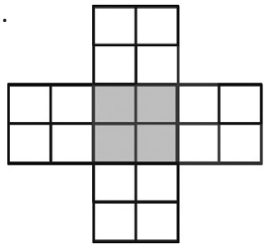


**Read** **Draw** **Write**

Name _____ Date _____

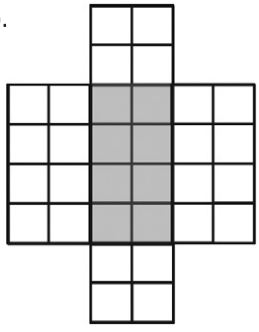
1. Shade the following figures on centimeter grid paper. Cut and fold each to make 3 open boxes, taping them so they hold their shapes. Pack each box with cubes. Write how many cubes fill each box.

a. Number of cubes: _____

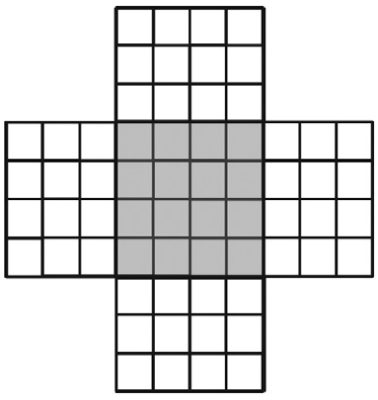


.

b. Number of cubes: _____



c Number of cubes: _____

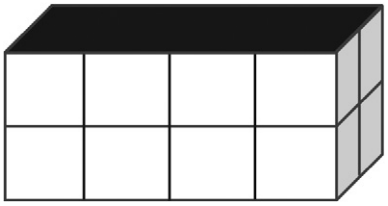


2. Predict how many centimeter cubes will fit in each box, and briefly explain your predictions. Use cubes to find the actual volume. (The figures are not drawn to scale.)

a.

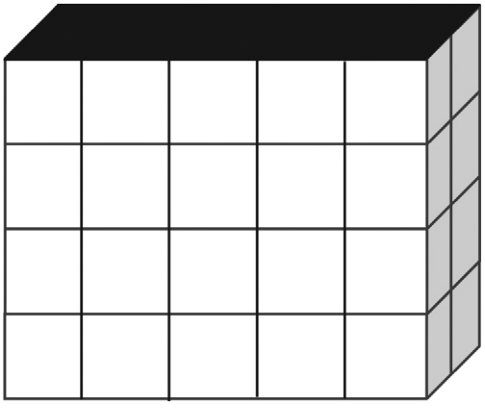
Prediction: _____

Actual: _____

b. 

Prediction: _____

Actual: _____

c. 

Prediction: _____

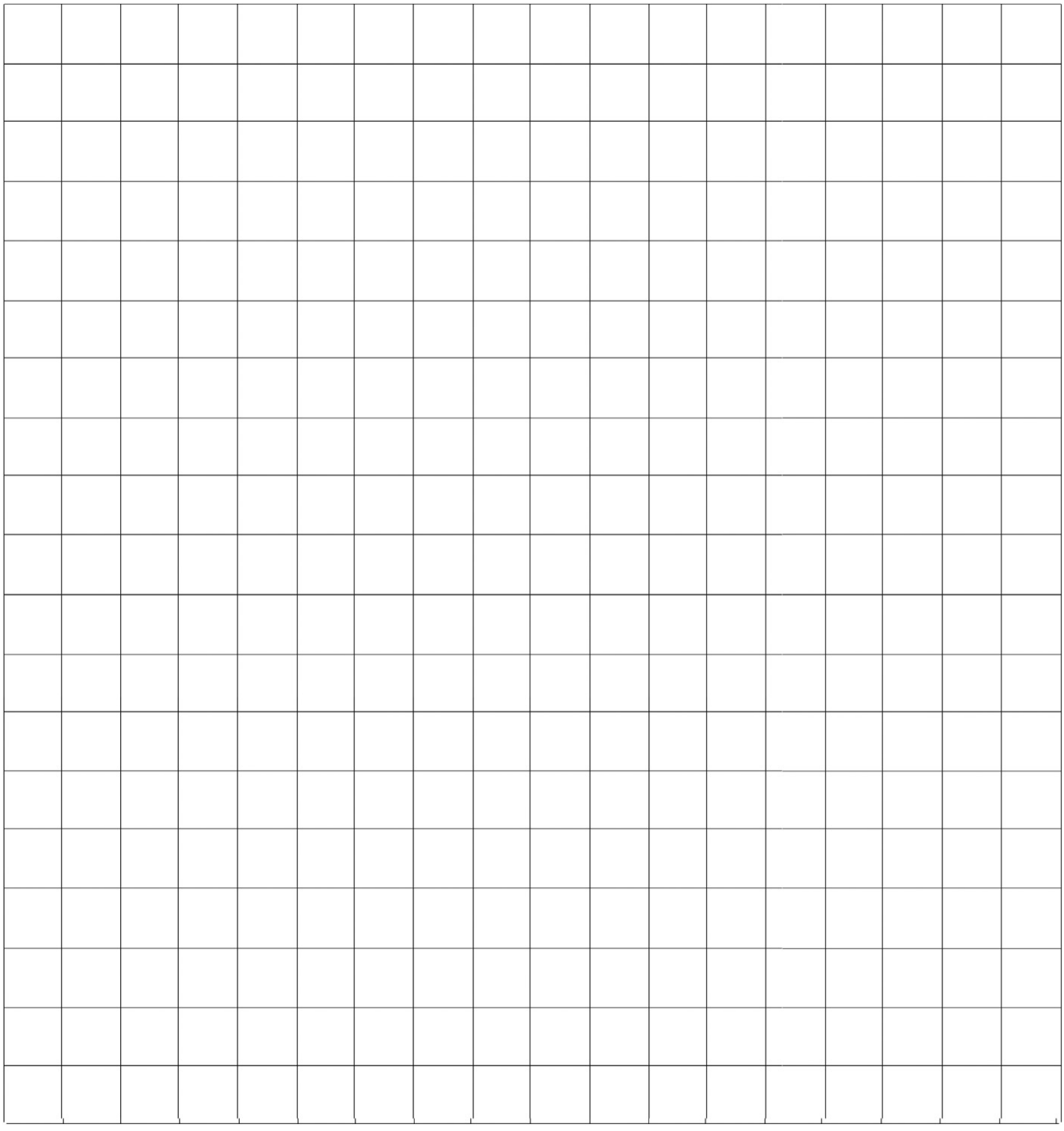
Actual: _____

3. Cut out the net in the template, and fold it into a cube. Predict the number of 1-centimeter cubes that would be required to fill it.

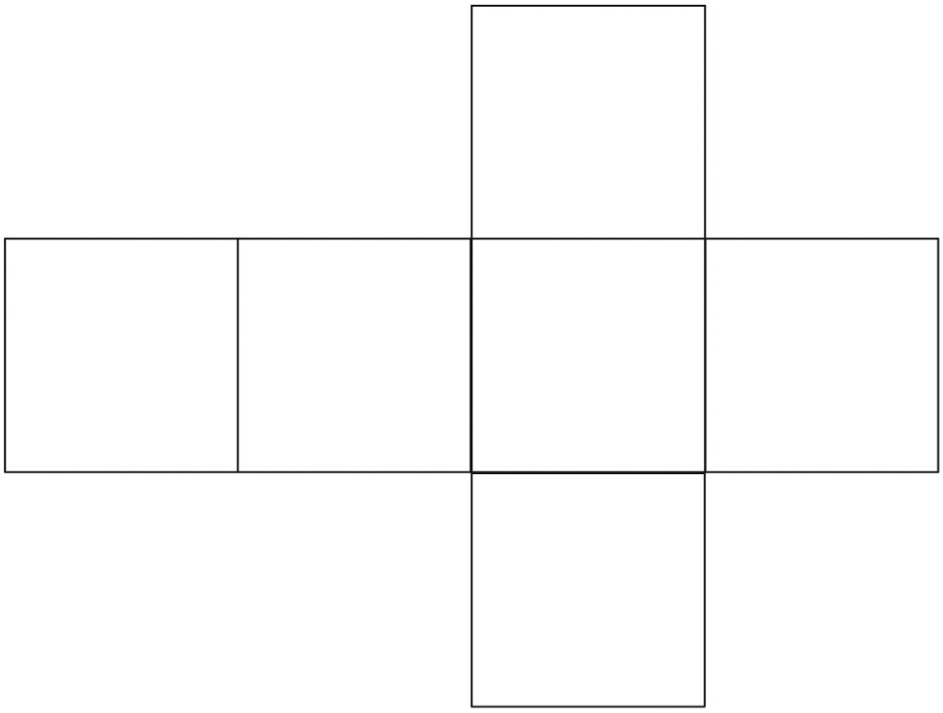
   a. Prediction: _____

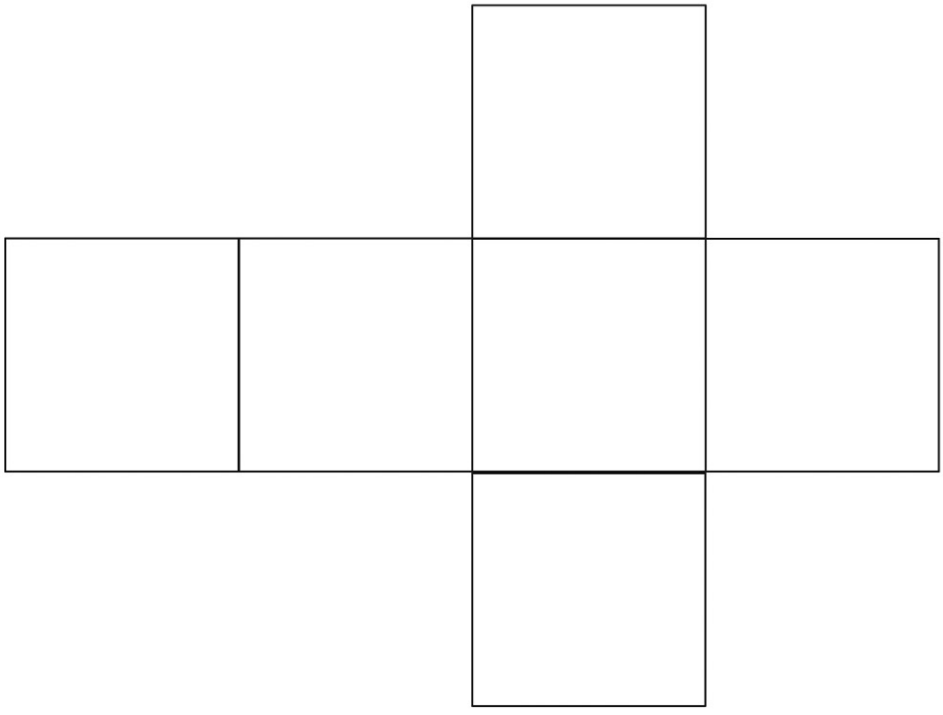
   b. Explain your thought process as you made your prediction.

   c. How many 1-centimeter cubes are used to fill the figure? Was your prediction accurate?



centimeter grid paper - from Lesson 1





net

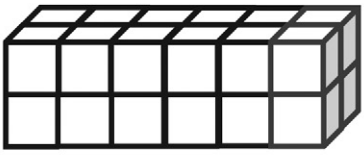
An ice cube tray has two rows of 8 ice cubes. How many ice cubes are in a stack of 12 ice cube trays? Draw a picture to explain your reasoning.

**Read** **Draw** **Write**

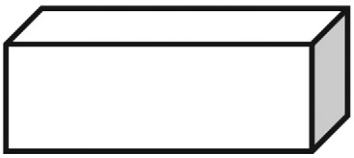
Name _____ Date _____

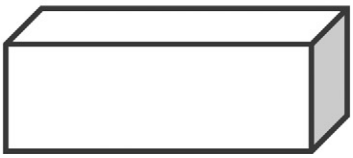
1. Use the prisms to find the volume.
   - Build the rectangular prism pictured below to the left with your cubes, if necessary.
   - Decompose it into layers in three different ways, and show your thinking on the blank prisms.
   - Complete the missing information in the table.

a.

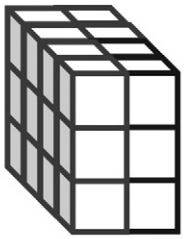


| Number of Layers | Number of Cubes in Each Layer | Volume of the Prism |
|---|---|---|
| | | cubic cm |
| | | cubic cm |
| | | cubic cm |

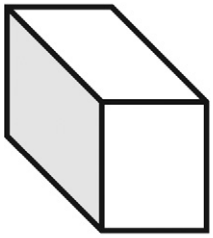


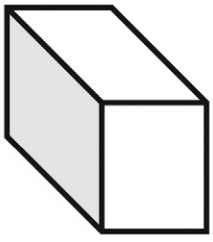


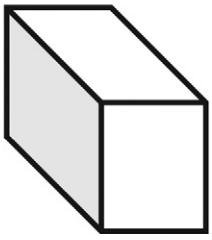
b.



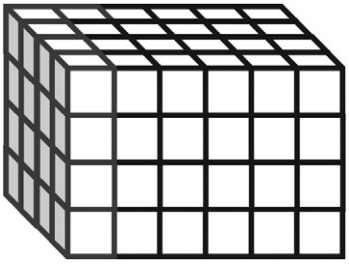
| Number of Layers | Number of Cubes in Each Layer | Volume of the Prism |
|---|---|---|
| | | cubic cm |
| | | cubic cm |
| | | cubic cm |







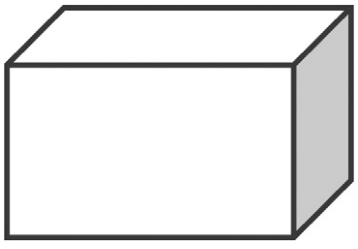
2. Josh and Jonah were finding the volume of the prism to the right. The boys agree that 4 layers can be added together to find the volume. Josh says that he can see on the end of the prism that each layer will have 16 cubes in it. Jonah says that each layer has 24 cubes in it. Who is right? Explain how you know using words, numbers, and/or pictures.



3. Marcos makes a prism 1 inch by 5 inches by 5 inches. He then decides to create layers equal to his first one. Fill in the chart below, and explain how you know the volume of each new prism.

| Number of Layers | Volume | Explanation |
|---|---|---|
| 2 | | |
| 4 | | |
| 7 | | |

4. Imagine the rectangular prism below is 6 meters long, 4 meters tall, and 2 meters wide. Draw horizontal lines to show how the prism could be decomposed into layers that are 1 meter in height.



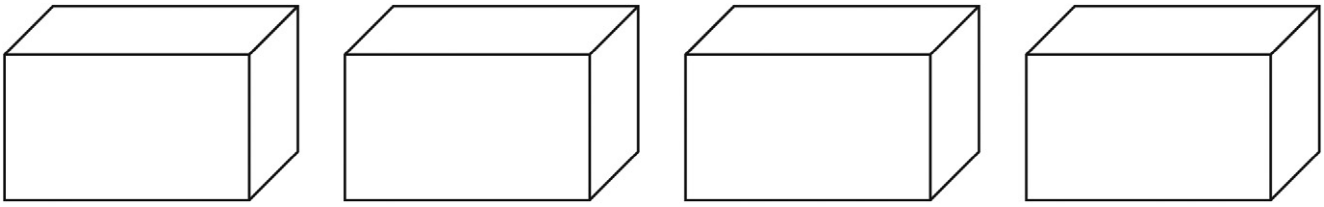
It has _____ layers from bottom to top.

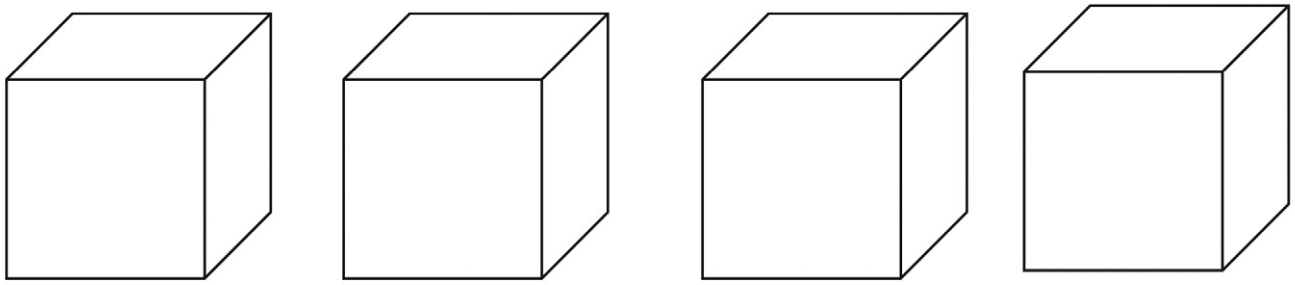
Each horizontal layer contains _____ cubic meters.

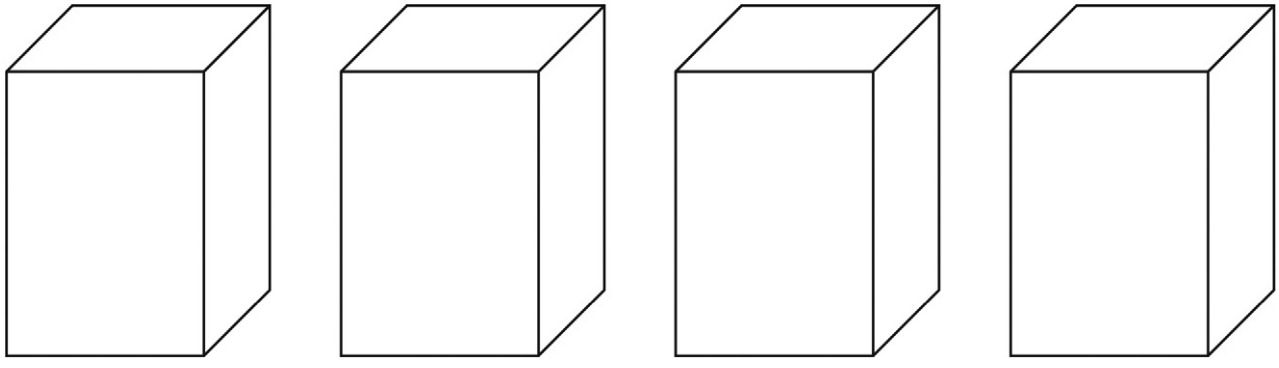
The volume of this prism is _____.

Name _____ Date _____

Use these rectangular prisms to record the layers that you count.

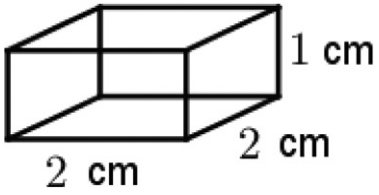






rectangular prism recording sheet

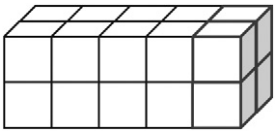
Karen says that the volume of this prism is 5 $cm^3$ and that she calculated it by adding the sides together. Give the correct volume of this prism, and explain Karen's error.



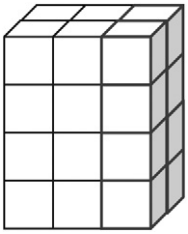

**Read** **Draw** **Write**

Name _____ Date _____

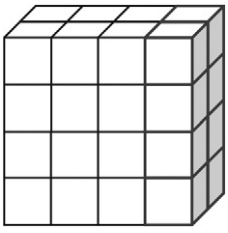
1. Each rectangular prism is built from centimeter cubes. State the dimensions, and find the volume.

a. 

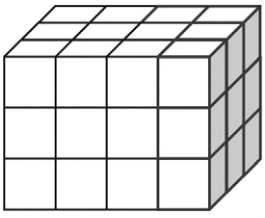
Length: _____ cm
Width: _____ cm
Height: _____ cm
Volume: _____ $cm^3$

b. 

Length: _____ cm
Width: _____ cm
Height: _____ cm
Volume: _____ $cm^3$

c. 

Length: _____ cm
Width: _____ cm
Height: _____ cm
Volume: _____ $cm^3$

d. 

Length: _____ cm
Width: _____ cm
Height: _____ cm
Volume: _____ $cm^3$

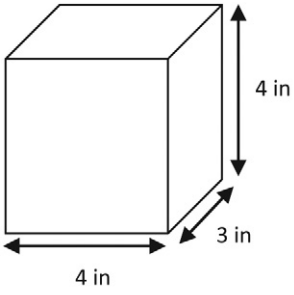
2. Write a multiplication sentence that you could use to calculate the volume for each rectangular prism in Problem 1. Include the units in your sentences.

a. _____ b. _____

c. _____ d. _____

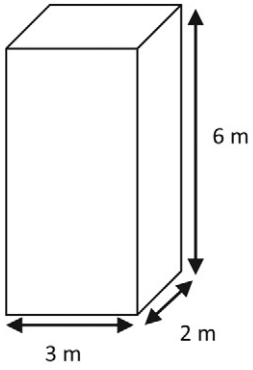
3. Calculate the volume of each rectangular prism. Include the units in your number sentences.

a.




V = _____

b.

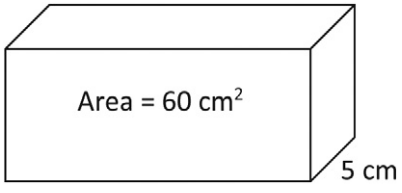



V = _____

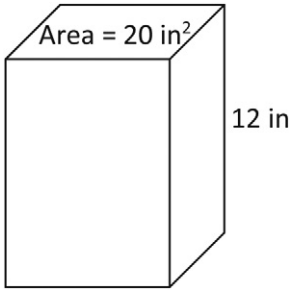
4. Tyron is constructing a box in the shape of a rectangular prism to store his baseball cards. It has a length of 10 centimeters, a width of 7 centimeters, and a height of 8 centimeters. What is the volume of the box?

5. Aaron says more information is needed to find the volume of the prisms. Explain why Aaron is mistaken, and calculate the volume of the prisms.

a.

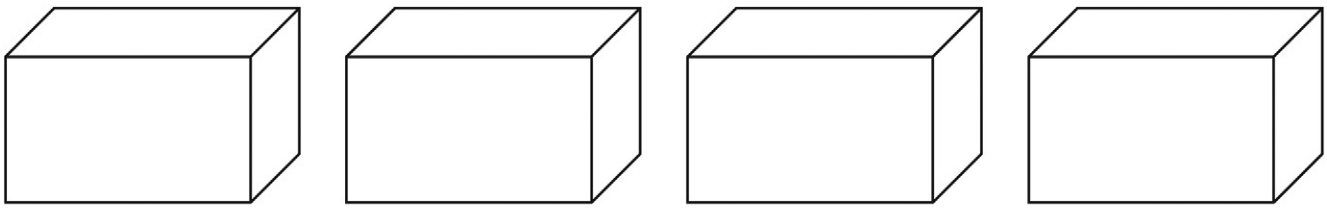


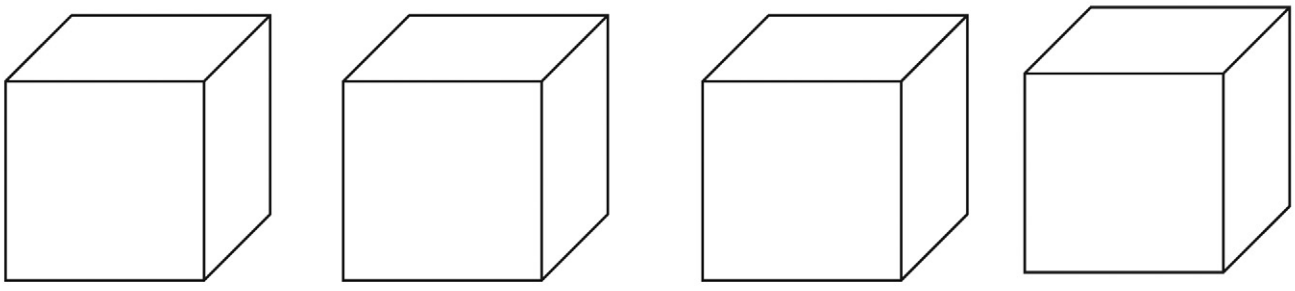

b.

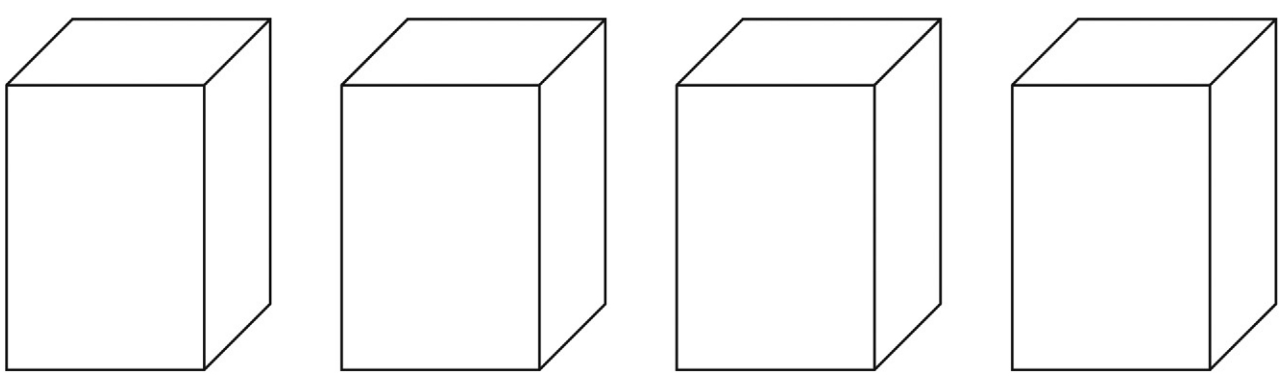


Name _____ Date _____

Use these rectangular prisms to record the layers that you count.







rectangular prism recording sheet - from Lesson 3

Name _____ Date _____

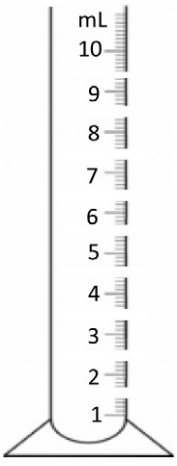
1. Determine the volume of two boxes on the table using cubes, and then confirm by measuring and multiplying.

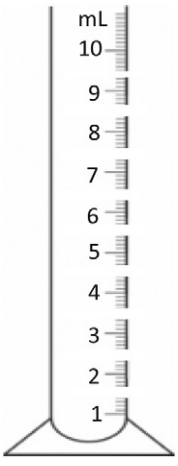
| Box Number | Number of Cubes Packed | Measurements | | | Volume |
|---|---|---|---|---|---|
| | | Length | Width | Height | |
| | | | | | |
| | | | | | |

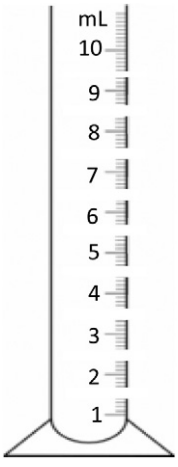
2. Using the same boxes from Problem 1, record the amount of liquid that your box can hold.

| Box Number | Liquid the Box Can Hold |
|---|---|
| | mL |
| | mL |

3. Shade to show the water in the graduated cylinder.




At first:

_____ mL

After 1 mL water added:

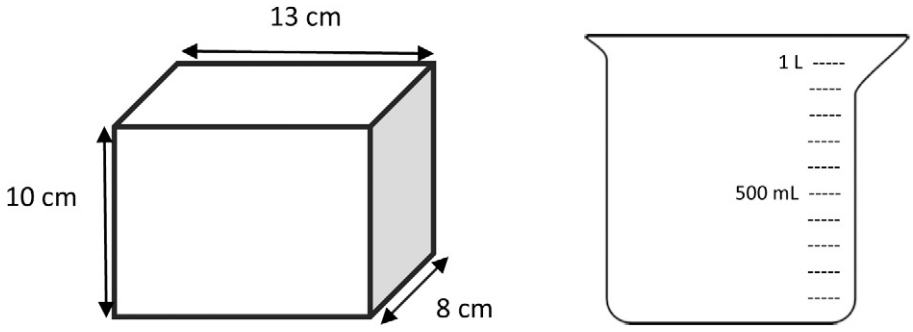
_____ mL

After 1 cm cube added:

_____ mL

4. What conclusion can you draw about 1 cubic centimeter and 1 mL?

5. The tank, shaped like a rectangular prism, is filled to the top with water.




Will the beaker hold all the water in the tank? If yes, how much more will the beaker hold? If no, how much more will the tank hold than the beaker? Explain how you know.

6. A rectangular fish tank measures 26 cm by 20 cm by 18 cm. The tank is filled with water to a depth of 15 cm.

   a. What is the volume of the water in mL?

   b. How many liters is that?

   c. How many more mL of water will be needed to fill the tank to the top? Explain how you know.

7. A rectangular container is 25 cm long and 20 cm wide. If it holds 1 liter of water when full, what is its height?

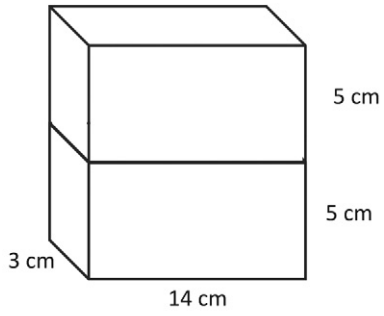
A storage company advertises three different choices for all your storage needs: "The Cube," a true cube with a volume of 64 $m^3$; "The Double" (double the volume of "The Cube"); and "The Half" (half the volume of "The Cube"). What could be the dimensions of the three storage units? How might they be oriented to cover the most floor space? The most height?

**Read** **Draw** **Write**

Name _____ Date _____

1. Find the total volume of the figures, and record your solution strategy.

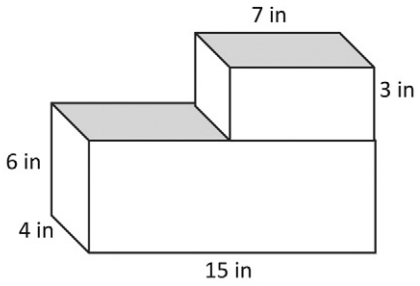
a.




Volume: _____

Solution Strategy:

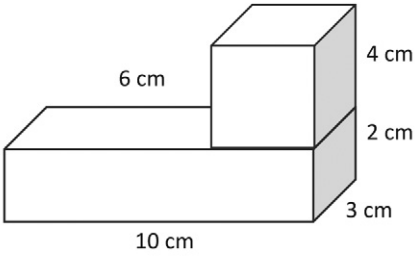
b.




Volume: _____

Solution Strategy:

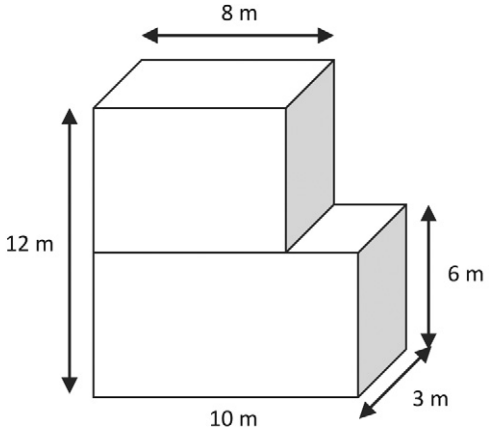
c.




Volume: _____

Solution Strategy:

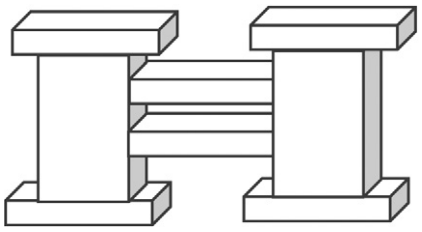
d.




Volume: _____

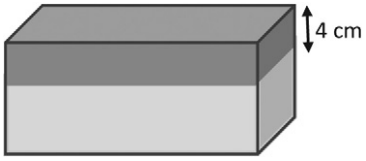
Solution Strategy:

2. A sculpture (pictured below) is made of two sizes of rectangular prisms. One size measures 13 in by 8 in by 2 in. The other size measures 9 in by 8 in by 18 in. What is the total volume of the sculpture?



3. The combined volume of two identical cubes is 128 cubic centimeters. What is the side length of each cube?

4. A rectangular tank with a base area of 24 $cm^2$ is filled with water and oil to a depth of 9 cm. The oil and water separate into two layers when the oil rises to the top. If the thickness of the oil layer is 4 cm, what is the volume of the water?




5. Two rectangular prisms have a combined volume of 432 cubic feet. Prism A has half the volume of Prism B.

   a. What is the volume of Prism A? Prism B?

   b. If Prism A has a base area of 24 $ft^2$, what is the height of Prism A?

   c. If Prism B's base is $\frac{2}{3}$ the area of Prism A's base, what is the height of Prism B?

Name _____ Date _____

Geoffrey builds rectangular planters.

1. Geoffrey's first planter is 8 feet long and 2 feet wide. The container is filled with soil to a height of 3 feet in the planter. What is the volume of soil in the planter? Explain your work using a diagram.

2. Geoffrey wants to grow some tomatoes in four large planters. He wants each planter to have a volume of 320 cubic feet, but he wants them all to be different. Show four different ways Geoffrey can make these planters, and draw diagrams with the planters' measurements on them.

| Planter A | Planter B |
|---|---|
| Planter C | Planter D |

3. Geoffrey wants to make one planter that extends from the ground to just below his back window. The window starts 3 feet off the ground. If he wants the planter to hold 36 cubic feet of soil, name one way he could build the planter so it is not taller than 3 feet. Explain how you know.

4. After all of this gardening work, Geoffrey decides he needs a new shed to replace the old one. His current shed is a rectangular prism that measures 6 feet long by 5 feet wide by 8 feet high. He realizes he needs a shed with 480 cubic feet of storage.

   a. Will he achieve his goal if he doubles each dimension? Why or why not?

   b. If he wants to keep the height the same, what could the other dimensions be for him to get the volume he wants?

   c. If he uses the dimensions in part (b), what could be the area of the new shed's floor?

Name _____ Date _____

Using the box patterns, construct a sculpture containing at least 5, but not more than 7, rectangular prisms that meets the following requirements in the table below.

| | | |
|---|---|---|
| 1. | My sculpture has 5 to 7 rectangular prisms. Number of prisms: _____ | |
| 2. | Each prism is labeled with a letter, dimensions, and volume. | |
| | Prism A _____ by _____ by _____ Volume = _____<br>Prism B _____ by _____ by _____ Volume = _____<br>Prism C _____ by _____ by _____ Volume = _____<br>Prism D _____ by _____ by _____ Volume = _____<br>Prism E _____ by _____ by _____ Volume = _____<br>Prism __ _____ by _____ by _____ Volume = _____<br>Prism __ _____ by _____ by _____ Volume = _____ | |
| 3. | Prism D has $\frac{1}{2}$ the volume of Prism ____. | Prism D Volume = _____<br>Prism ____ Volume = _____ |
| 4. | Prism E has $\frac{1}{3}$ the volume of Prism ____. | Prism E Volume = _____<br>Prism ____ Volume = _____ |
| 5. | The total volume of all the prisms is 1,000 cubic centimeters or less. | Total volume: _____<br>Show calculations: |

**Project Requirements**

1. Each project must include 5 to 7 rectangular prisms.
2. All prisms must be labeled with a letter (beginning with A), dimensions, and volume.
3. Prism D must be $\frac{1}{2}$ the volume of another prism.
4. Prism E must be $\frac{1}{3}$ the volume of another prism.
5. The total volume of all of the prisms must be 1,000 cubic centimeters or less.

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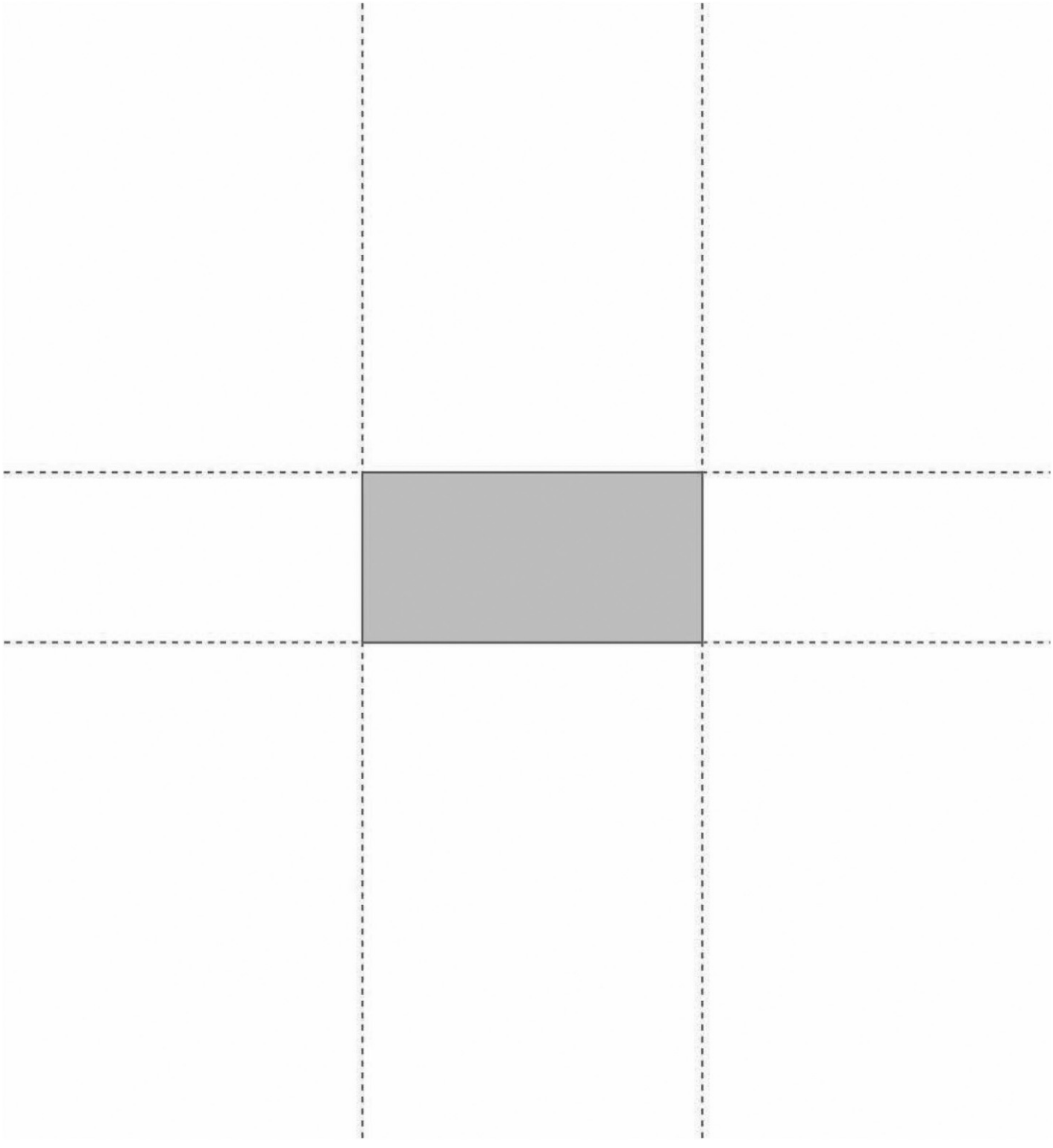
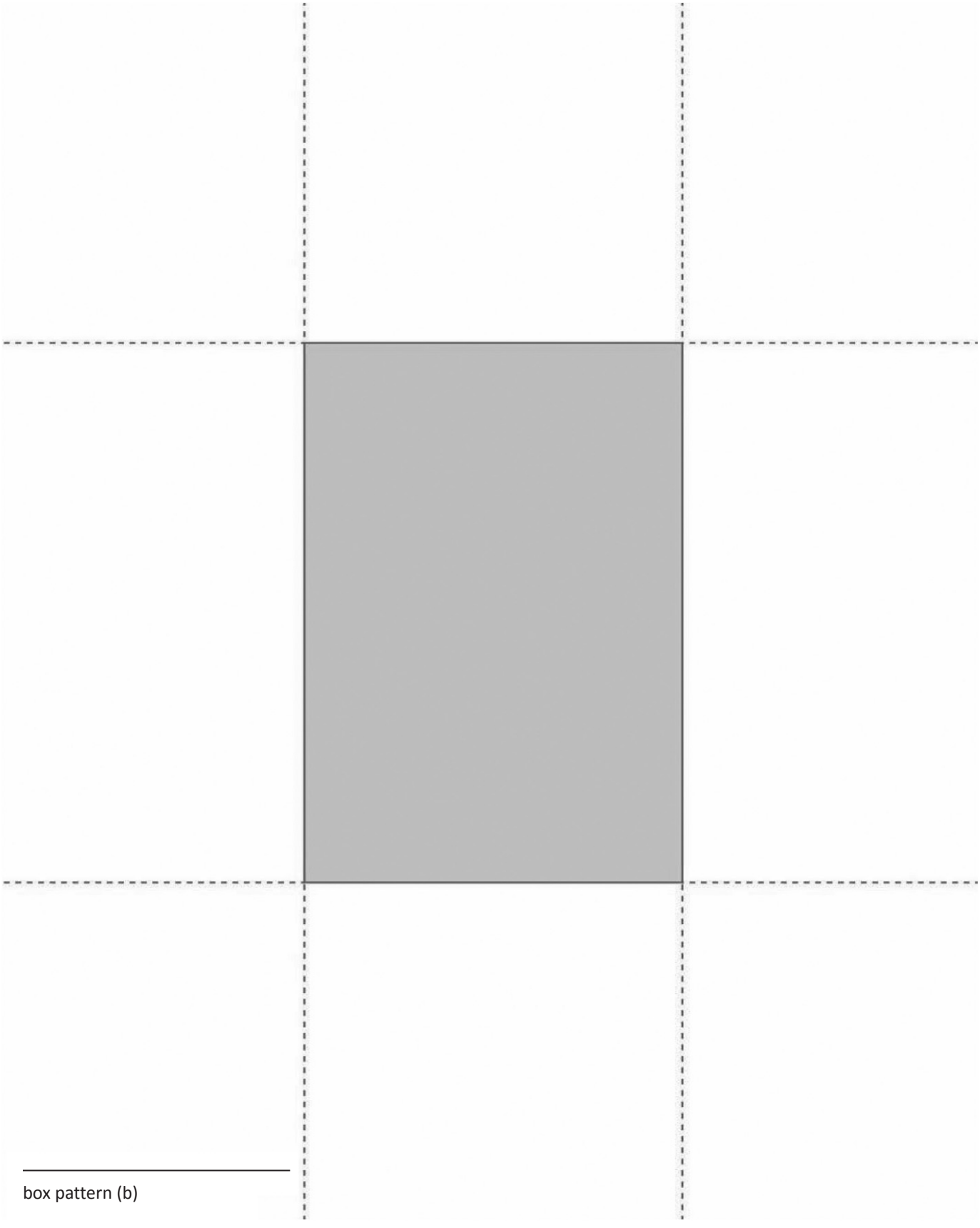
project requirements

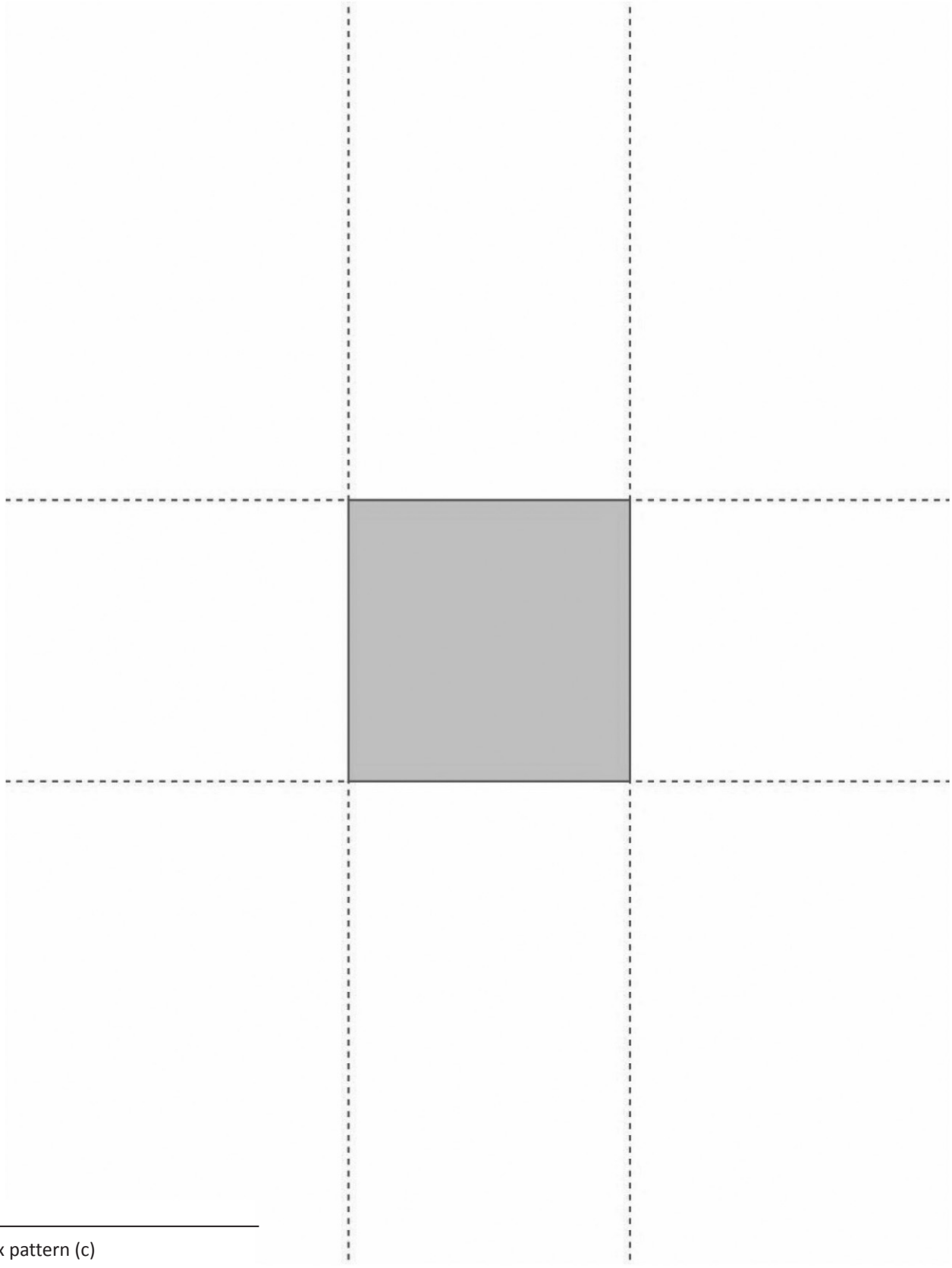
Note: Be sure to set printer to *actual size* before printing.



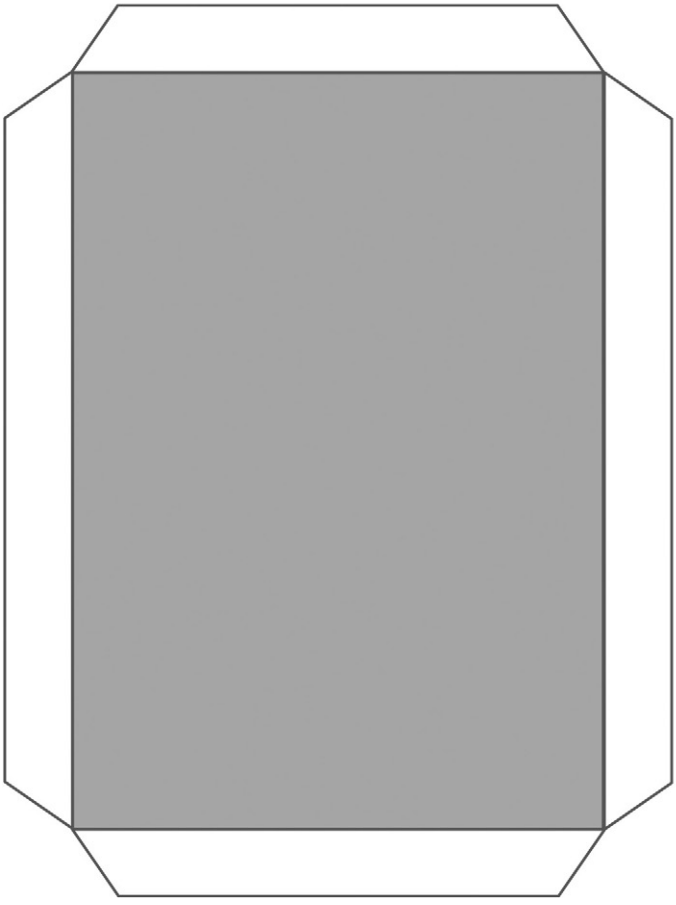
box pattern (a)

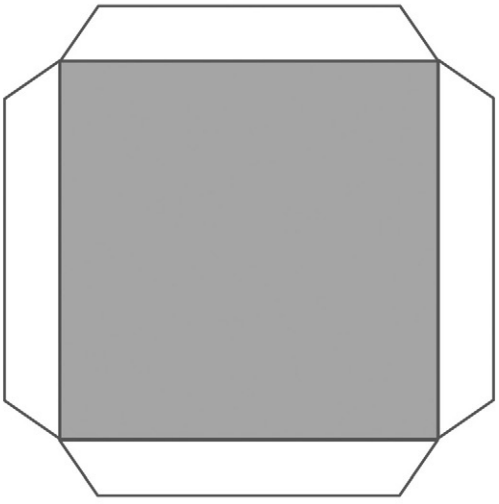


box pattern (b)



box pattern (c)





lid patterns

Name _____ Date _____

## Evaluation Rubric

| CATEGORY | 4 | 3 | 2 | 1 | Subtotal |
|---|---|---|---|---|---|
| **Completeness of Personal Project and Classmate Evaluation** | All components of the project are present and correct, and a detailed evaluation of a classmate's project has been completed. | Project is missing 1 component, and a detailed evaluation of a classmate's project has been completed. | Project is missing 2 components, and an evaluation of a classmate's project has been completed. | Project is missing 3 or more components, and an evaluation of a classmate's project has been completed. | (× 4) _____/16 |
| **Accuracy of Calculations** | Volume calculations for all prisms are correct. | Volume calculations include 1 error. | Volume calculations include 2–3 errors. | Volume calculations include 4 or more errors. | (× 5) _____/20 |
| **Neatness and Use of Color** | All elements of the project are carefully and colorfully constructed. | Some elements of the project are carefully and colorfully constructed. | Project lacks color or is not carefully constructed. | Project lacks color and is not carefully constructed. | (× 2) _____/4 |
| | | | | | **TOTAL:** _____ /40 |

evaluation rubric

The chart below shows the dimensions of various rectangular packing boxes. If possible, answer the following without calculating the volume.

| Box Type | Dimensions (1 × w × h) |
|---|---|
| **Book Box** | 12 in × 12 in × 12 in |
| **Picture Box** | 36 in × 12 in × 36 in |
| **Lamp Box** | 12 in × 9 in × 48 in |
| **The Flat** | 12 in × 6 in × 24 in |

a. Which box will provide the greatest volume?

**Read** **Draw** **Write**

b. Which box has a volume that is equal to the volume of the book box? How do you know?

c. Which box is $\frac{1}{3}$ the volume of the lamp box?

**Read** **Draw** **Write**

Name _____ Date _____

I reviewed project number _____.

Use the rubric below to evaluate your friend's project. Ask questions and measure the parts to determine whether your friend has all the required elements. Respond to the prompt in italics in the third column. The final column can be used to write something you find interesting about that element if you like.

Space is provided beneath the rubric for your calculations.

| | Requirement | Element Present? (✓) | Specifics of Element | Notes |
|---|---|---|---|---|
| 1. | The sculpture has 5 to 7 prisms. | | *# of prisms:* | |
| 2. | All prisms are labeled with a letter. | | *Write letters used:* | |
| 3. | All prisms have correct dimensions with units written on the top. | | *List any prisms with incorrect dimensions or units:* | |
| 4. | All prisms have correct volume with units written on the top. | | *List any prism with incorrect dimensions or units:* | |
| 5. | Prism D has $\frac{1}{2}$ the volume of another prism. | | *Record on next page:* | |
| 6. | Prism E has $\frac{1}{3}$ the volume of another prism. | | *Record on next page:* | |
| 7. | The total volume of all the parts together is 1,000 cubic units or less. | | *Total volume:* | |

**Calculations:**

8. Measure the dimensions of each prism. Calculate the volume of each prism and the total volume. Record that information in the table below. If your measurements or volume differ from those listed on the project, put a star by the prism label in the table below, and record on the rubric.

| Prism | Dimensions | Volume |
|---|---|---|
| A | _____ by _____ by _____ | |
| B | _____ by _____ by _____ | |
| C | _____ by _____ by _____ | |
| D | _____ by _____ by _____ | |
| E | _____ by _____ by _____ | |
| | _____ by _____ by _____ | |
| | _____ by _____ by _____ | |

9. Prism D's volume is $\frac{1}{2}$ that of Prism _____.
   Show calculations below.

10. Prism E's volume is $\frac{1}{3}$ that of Prism _____.
    Show calculations below.

11. Total volume of sculpture: _____.
    Show calculations below.

Heidi and Andrew designed two raised flowerbeds for their garden. Heidi's flowerbed was 5 feet long by 3 feet wide, and Andrew's flowerbed was the same length but twice as wide. Calculate how many cubic feet of soil they need to buy to have soil to a depth of 2 feet in both flowerbeds.

**Read** **Draw** **Write**

Name _____ Date _____

Sketch the rectangles and your tiling. Write the dimensions and the units you counted in the blanks. Then, use multiplication to confirm the area. Show your work. We will do Rectangles A and B together.

1. **Rectangle A:**

Rectangle A is

_____ units long _____ units wide

Area = _____ units$^2$

2. **Rectangle B:**

Rectangle B is

_____ units long _____ units wide

Area = _____ units$^2$

3. **Rectangle C:**

Rectangle C is

_____ units long _____ units wide

Area = _____ units$^2$

4. **Rectangle D:**

Rectangle D is

_____ units long _____ units wide

Area = _____ units$^2$

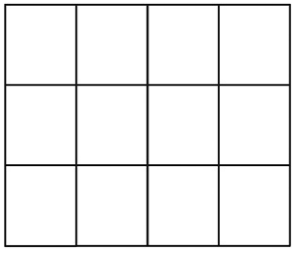
5. **Rectangle E:**

Rectangle E is

_____ units long _____ units wide

Area = _____ units$^2$

6. The rectangle to the right is composed of squares that measure $2\frac{1}{4}$ inches on each side. What is its area in square inches? Explain your thinking using pictures and numbers.



7. A rectangle has a perimeter of $35\frac{1}{2}$ feet. If the length is 12 feet, what is the area of the rectangle?

Mrs. Golden wants to cover her 6.5-foot by 4-foot bulletin board with silver paper that comes in 1-foot squares. How many squares does Mrs. Golden need to cover her bulletin board? Will there be any fractional pieces of silver paper left over? Explain why or why not. Draw a sketch to show your thinking.

**Read** **Draw** **Write**

Name _____ Date _____

Draw the rectangle and your tiling.
Write the dimensions and the units you counted in the blanks.
Then, use multiplication to confirm the area. Show your work.

1. **Rectangle A:**

Rectangle A is

_____ units long _____ units wide

Area = _____$units^2$

2. **Rectangle B:**

Rectangle B is

_____ units long _____ units wide

Area = _____$units^2$

3. **Rectangle C:**

Rectangle C is

_____ units long _____ units wide

Area = _____$units^2$

4. **Rectangle D:**

Rectangle D is

_____ units long _____ units wide

Area = _____$units^2$

5. Colleen and Caroline each built a rectangle out of square tiles placed in 3 rows of 5. Colleen used tiles that measured $1\frac{2}{3}$ cm in length. Caroline used tiles that measured $3\frac{1}{3}$ cm in length.

   a. Draw the girls' rectangles, and label the lengths and widths of each.

   b. What are the areas of the rectangles in square centimeters?

   c. Compare the areas of the rectangles.

6. A square has a perimeter of 51 inches. What is the area of the square?

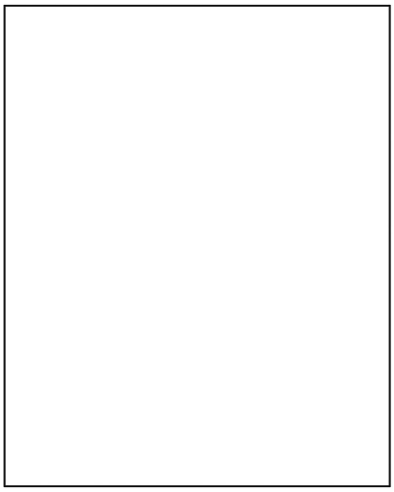
Margo is designing a label. The dimensions of the label are $3\frac{1}{2}$ inches by $1\frac{1}{4}$ inches. What is the area of the label?

**Read** **Draw** **Write**

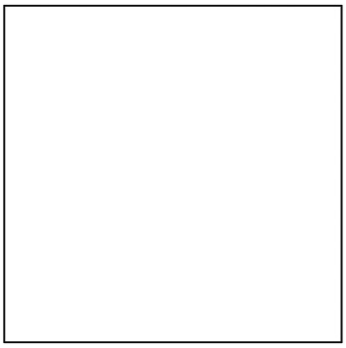
Name _____ Date _____

1. Measure each rectangle to the nearest $\frac{1}{4}$ inch with your ruler, and label the dimensions. Use the area model to find each area.

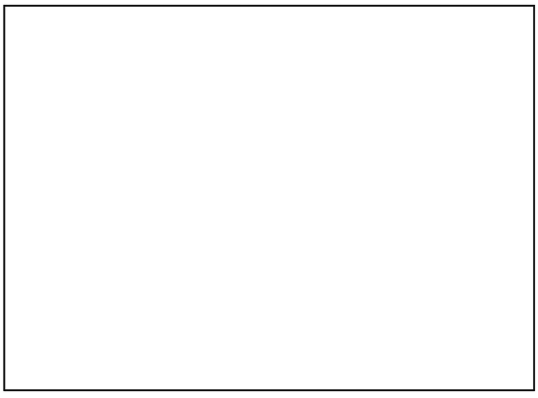
a.



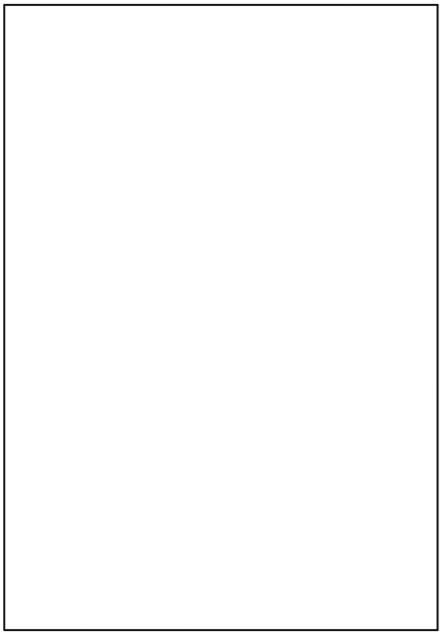
b.



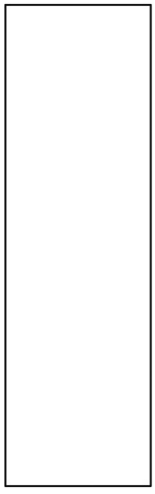
c.



d.



e.



f.

2. Find the area of rectangles with the following dimensions. Explain your thinking using the area model.

a. $1\text{ ft} \times 1\frac{1}{2}\text{ ft}$

b. $1\frac{1}{2}\text{yd} \times 1\frac{1}{2}\text{yd}$

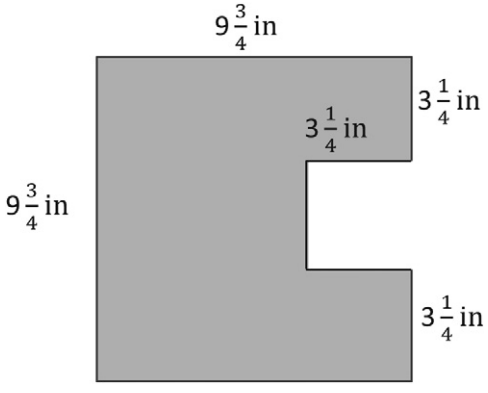
c. $2\frac{1}{2}\text{yd} \times 1\frac{3}{16}\text{ yd}$

3. Hanley is putting carpet in her house. She wants to carpet her living room, which measures $15 \text{ ft} \times 12\frac{1}{3} \text{ ft}$. She also wants to carpet her dining room, which is $10\frac{1}{4} \text{ ft} \times 10\frac{1}{3} \text{ ft}$. How many square feet of carpet will she need to cover both rooms?

4. Fred cut a $9\frac{3}{4}$-inch square of construction paper for an art project. He cut a square from the edge of the big rectangle whose sides measured $3\frac{1}{4}$ inches. (See the picture below.)

   a. What is the area of the smaller square that Fred cut out?

   b. What is the area of the remaining paper?



The Colliers want to put new flooring in a $6\frac{1}{2}$-foot by $7\frac{1}{3}$-foot bathroom. The tiles they want come in 12-inch squares. What is the area of the bathroom floor? If the tiles cost $3.25 per square foot, how much will they spend on the flooring?

**Read** **Draw** **Write**

Name _____ Date _____

1. Find the area of the following rectangles. Draw an area model if it helps you.

a. $\frac{5}{4}$ km $\times \frac{12}{5}$ km

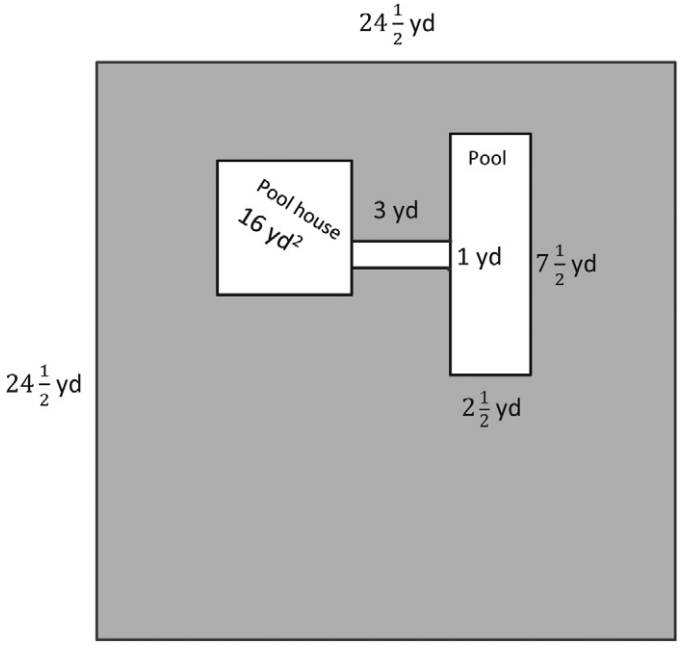
b. $16\frac{1}{2}$ m $\times 4\frac{1}{5}$ m

c. $4\frac{1}{3}$ yd $\times$ $5\frac{2}{3}$ yd

d. $\frac{7}{8}$ mi $\times$ $4\frac{1}{3}$ mi

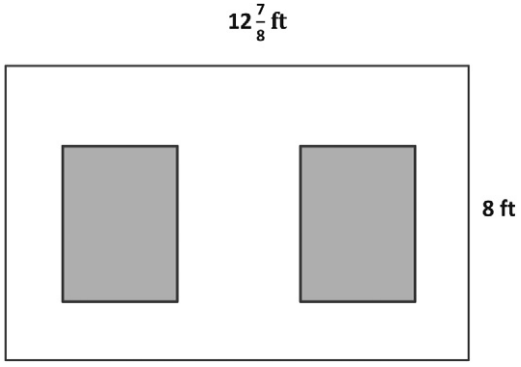
2. Julie is cutting rectangles out of fabric to make a quilt. If the rectangles are $2\frac{3}{5}$ inches wide and $3\frac{2}{3}$ inches long, what is the area of four such rectangles?

3. Mr. Howard's pool is connected to his pool house by a sidewalk as shown. He wants to buy sod for the lawn, shown in gray. How much sod does he need to buy?

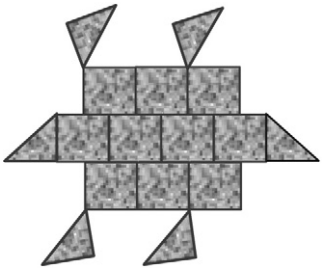


Name _____ Date _____

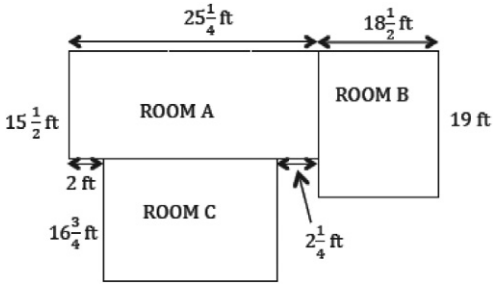
1. George decided to paint a wall with two windows. Both windows are $3\frac{1}{2}$-ft by $4\frac{1}{2}$-ft rectangles. Find the area the paint needs to cover.




2. Joe uses square tiles, some of which he cuts in half, to make the figure below. If each square tile has a side length of $2\frac{1}{2}$ inches, what is the total area of the figure?



3. All-In-One Carpets is installing carpeting in three rooms. How many square feet of carpet are needed to carpet all three rooms?



4. Mr. Johnson needs to buy sod for his front lawn.

   a. If the lawn measures $36\frac{2}{3}$ ft by $45\frac{1}{6}$ ft, how many square feet of sod will he need?

   b. If sod is only sold in whole square feet, how much will Mr. Johnson have to pay?

**Sod Prices**

| Area | Price per Square Foot |
|---|---|
| First 1,000 sq ft | $0.27 |
| Next 500 sq ft | $0.22 |
| Additional square feet | $0.19 |

5. Jennifer's class decides to make a quilt. Each of the 24 students will make a quilt square that is 8 inches on each side. When they sew the quilt together, every edge of each quilt square will lose $\frac{3}{4}$ of an inch.

   a. Draw one way the squares could be arranged to make a rectangular quilt. Then, find the perimeter of your arrangement.

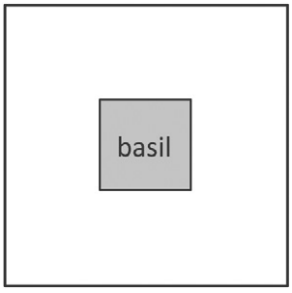
   b. Find the area of the quilt.

Name _____ Date _____

1. The length of a flowerbed is 4 times as long as its width. If the width is $\frac{3}{8}$ meter, what is the area?

2. Mrs. Johnson grows herbs in square plots. Her basil plot measures $\frac{5}{8}$ yd on each side.

   a. Find the total area of the basil plot.




   b. Mrs. Johnson puts a fence around the basil. If the fence is 2 ft from the edge of the garden on each side, what is the perimeter of the fence in feet?

c. What is the total area, in square feet, that the fence encloses?

3. Janet bought 5 yards of fabric $2\frac{1}{4}$-feet wide to make curtains. She used $\frac{1}{3}$ of the fabric to make a long set of curtains and the rest to make 4 short sets.

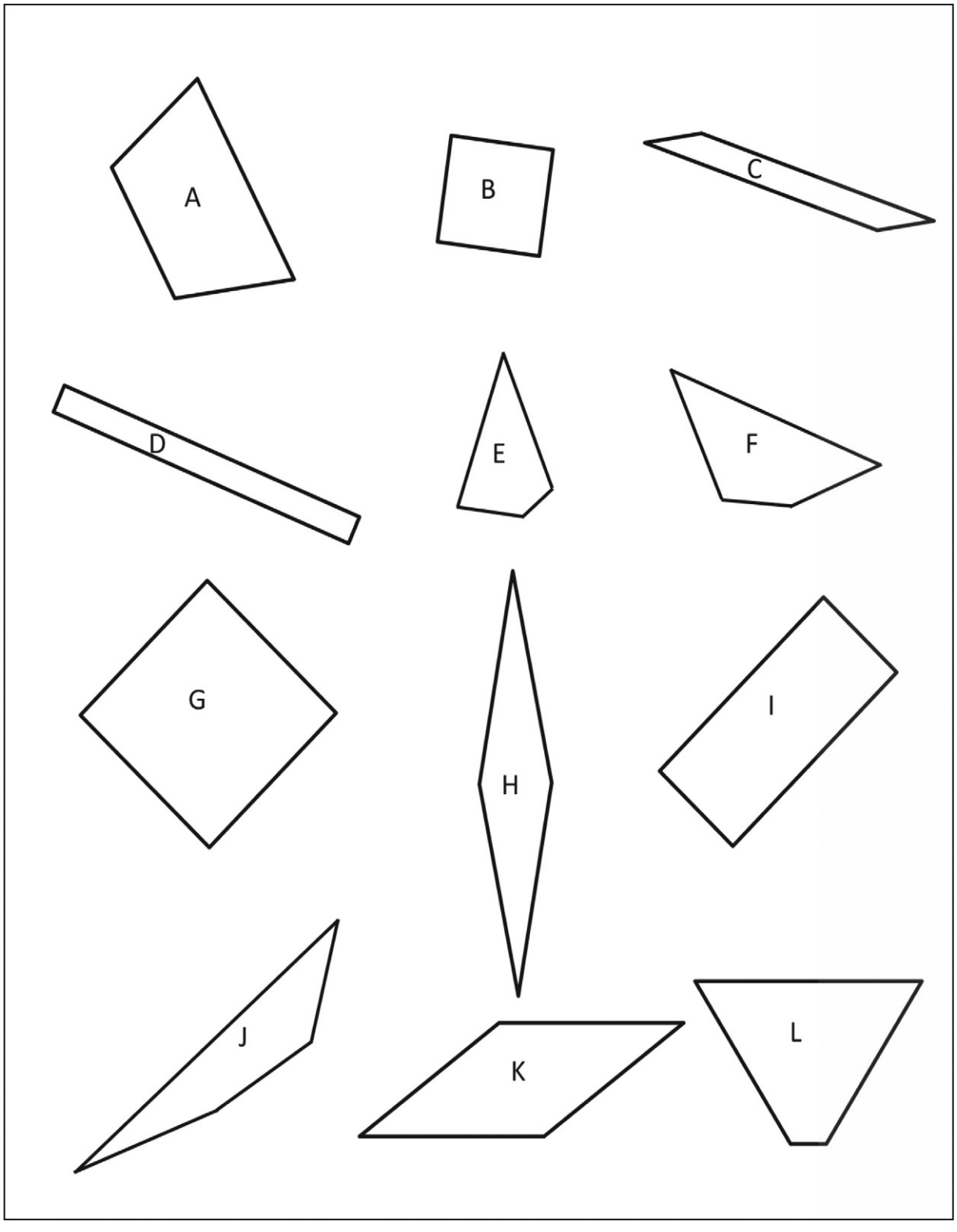
a. Find the area of the fabric she used for the long set of curtains.

b. Find the area of the fabric she used for each of the short sets.

4. Some wire is used to make 3 rectangles: A, B, and C. Rectangle B's dimensions are $\frac{3}{5}$ cm larger than Rectangle A's dimensions, and Rectangle C's dimensions are $\frac{3}{5}$ cm larger than Rectangle B's dimensions. Rectangle A is 2 cm by $3\frac{1}{5}$ cm.

   a. What is the total area of all three rectangles?

   b. If a 40-cm coil of wire was used to form the rectangles, how much wire is left?




shape sheet

Kathy spent 3 fifths of her money on a necklace and 2 thirds of the remainder on a bracelet. If the bracelet cost $17, how much money did she have at first?

**Read** **Draw** **Write**

Name _____ Date _____

1. Draw a pair of parallel lines in each box. Then, use the parallel lines to draw a trapezoid with the following:

| | |
|---|---|
| a. No right angles. | b. Only 1 obtuse angle. |
| c. 2 obtuse angles. | d. At least 1 right angle. |

2. Use the trapezoids you drew to complete the tasks below.

   a. Measure the angles of the trapezoid with your protractor, and record the measurements on the figures.

   b. Use a marker or crayon to circle pairs of angles inside each trapezoid with a sum equal to 180 °. Use a different color for each pair.

3. List the properties that are shared by all the trapezoids that you worked with today.

4. When can a quadrilateral also be called a trapezoid?

5. Follow the directions to draw one last trapezoid.

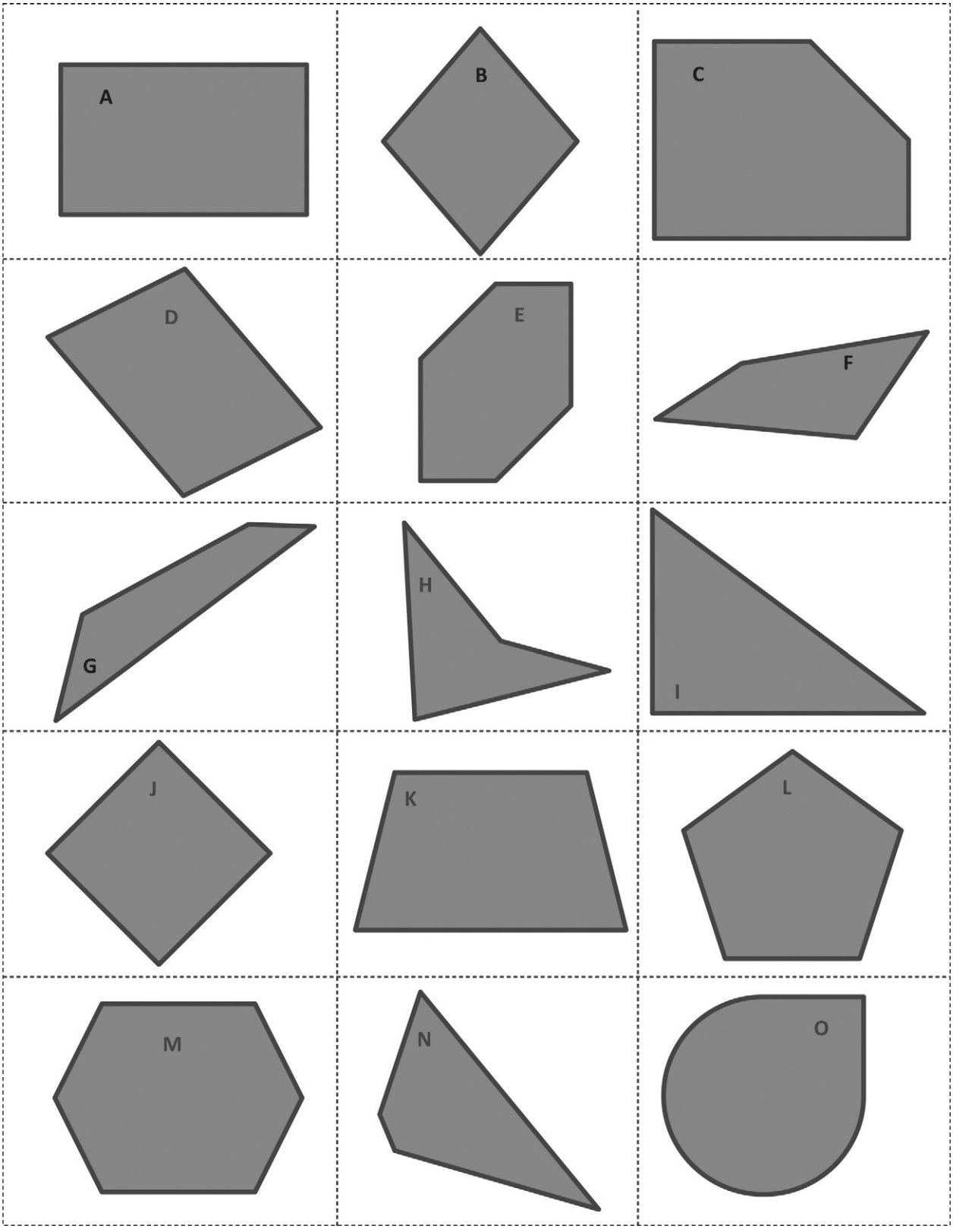
   a. Draw a segment $\overline{AB}$ parallel to the bottom of this page that is 5 cm long.

   b. Draw two 55° angles with vertices at $A$ and $B$ so that an isosceles triangle is formed with $\overline{AB}$ as the base of the triangle.

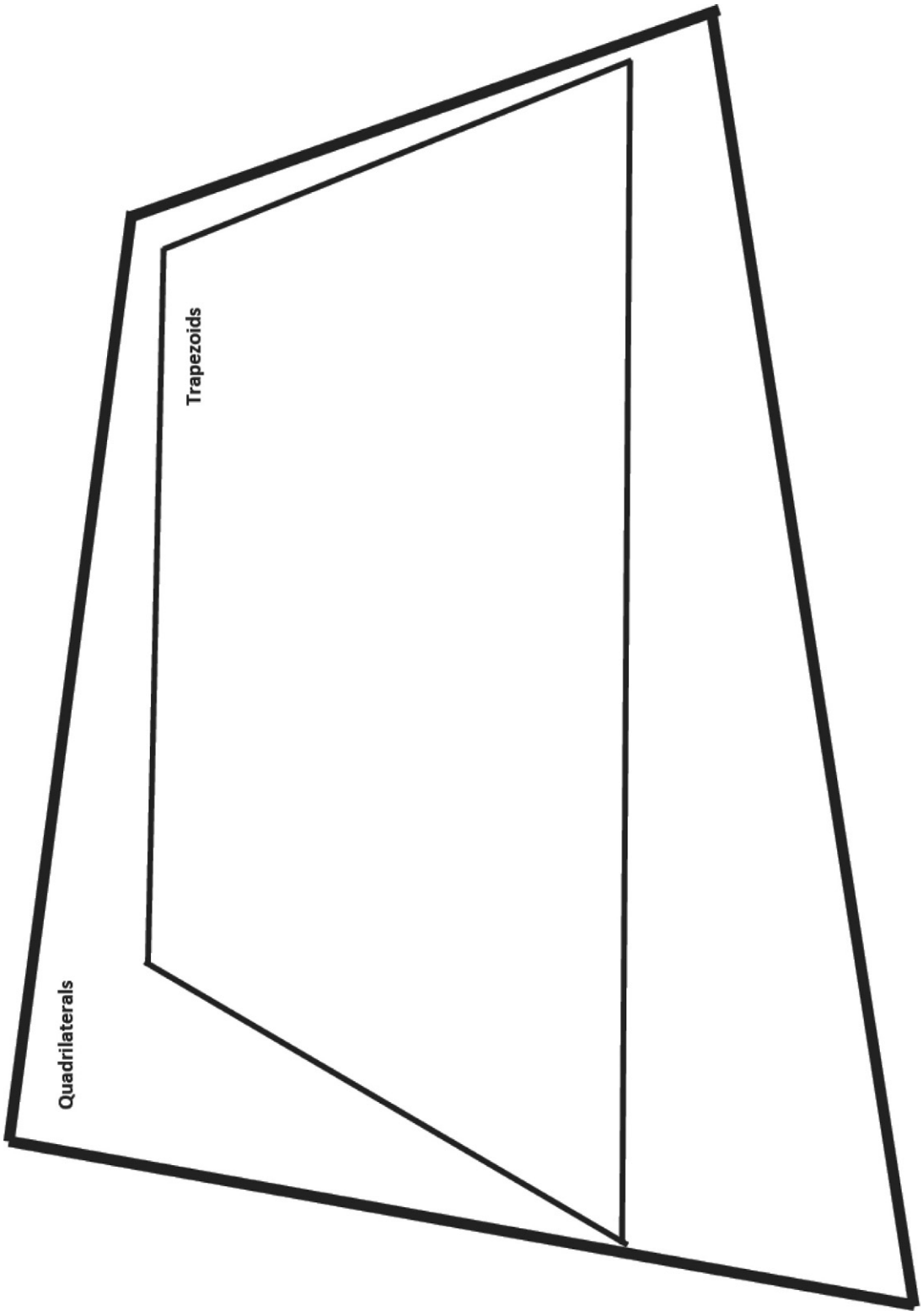
   c. Label the top vertex of your triangle as $C$.

   d. Use your set square to draw a line parallel to $\overline{AB}$ that intersects both $\overline{AC}$ and $\overline{AC}$.

   e. Shade the trapezoid that you drew.

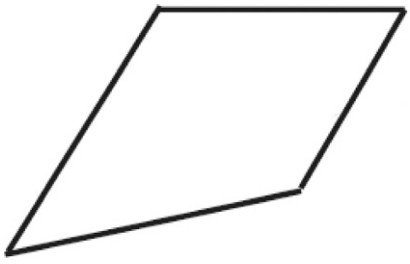



collection of polygons




quadrilateral hierarchy

Ava drew the quadrilateral shown and called it a trapezoid. Adam said Ava is wrong. Explain how a set square can be used to determine who is correct. Support your answer using the properties of trapezoids.



**Read** **Draw** **Write**

Name _____ Date _____

1. Draw a parallelogram in each box with the attributes listed.

| | |
|---|---|
| a. No right angles. | b. At least 2 right angles. |
| c. Equal sides with no right angles. | d. All sides equal with at least 2 right angles. |

2. Use the parallelograms you drew to complete the tasks below.

   a. Measure the angles of the parallelogram with your protractor, and record the measurements on the figures.

   b. Use a marker or crayon to circle pairs of angles inside each parallelogram with a sum equal to 180 °. Use a different color for each pair.

3. Draw another parallelogram below.

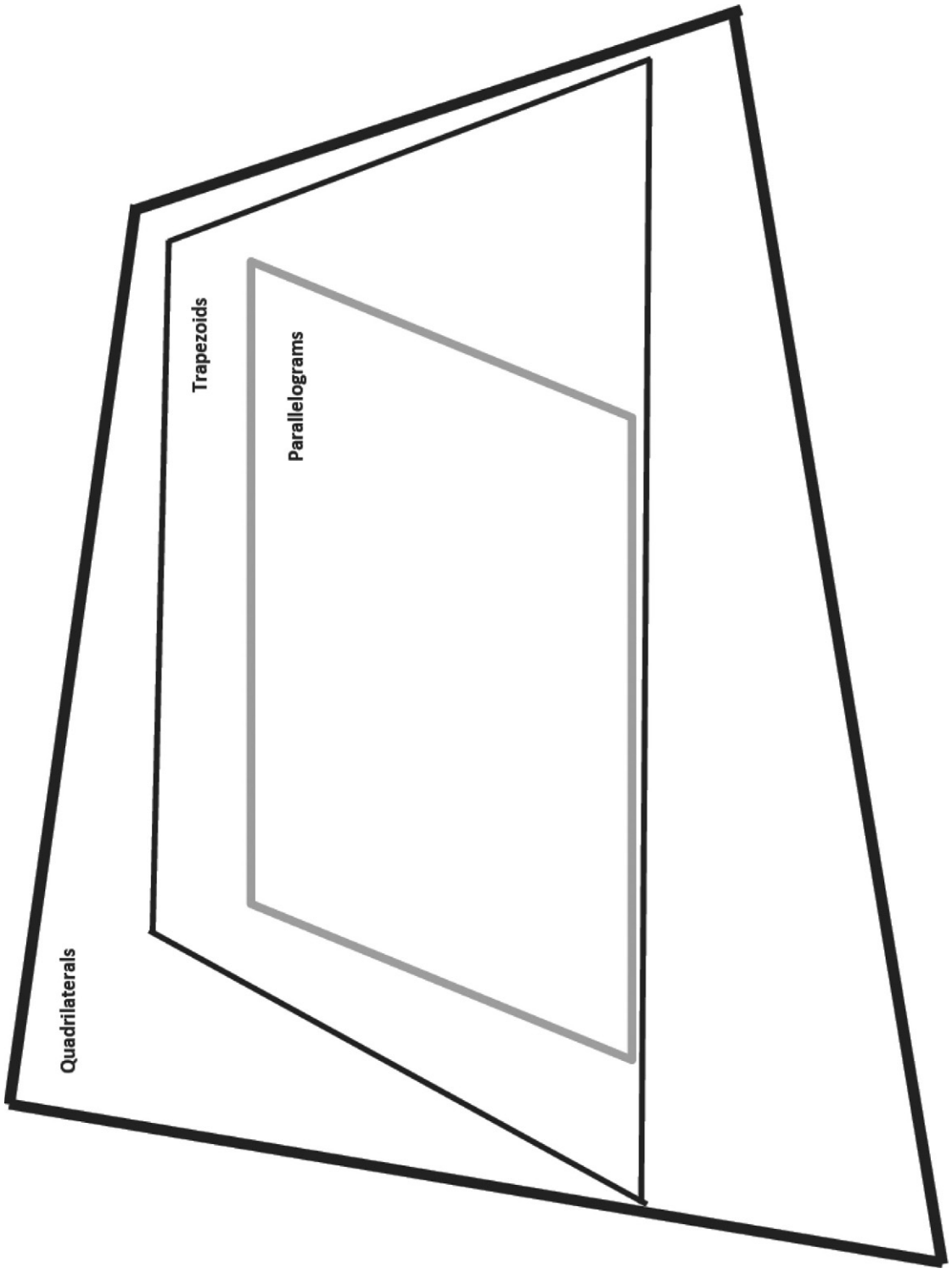
   a. Draw the diagonals, and measure their lengths. Record the measurements to the side of your figure.

   b. Measure the length of each of the four segments of the diagonals from the vertices to the point of intersection of the diagonals. Color the segments that have the same length the same color. What do you notice?

4. List the properties that are shared by all of the parallelograms that you worked with today.

   a. When can a quadrilateral also be called a parallelogram?

   b. When can a trapezoid also be called a parallelogram?




quadrilateral hierarchy with parallelogram

How many 2-inch cubes are needed to build a rectangular prism that measures 10 inches by 14 inches by 6 inches?

**Read** **Draw** **Write**

Name _____ Date _____

1. Draw the figures in each box with the attributes listed.

| | |
|---|---|
| a. Rhombus with no right angles | b. Rectangle with not all sides equal |
| c. Rhombus with 1 right angle | d. Rectangle with all sides equal |

2. Use the figures you drew to complete the tasks below.

   a. Measure the angles of the figures with your protractor, and record the measurements on the figures.

   b. Use a marker or crayon to circle pairs of angles inside each figure with a sum equal to 180 °. Use a different color for each pair.

3. Draw a rhombus and a rectangle below.

   a. Draw the diagonals, and measure their lengths. Record the measurements on the figure.

   b. Measure the length of each segment of the diagonals from the vertex to the intersection point of the diagonals. Using a marker or crayon, color segments that have the same length. Use a different color for each different length.

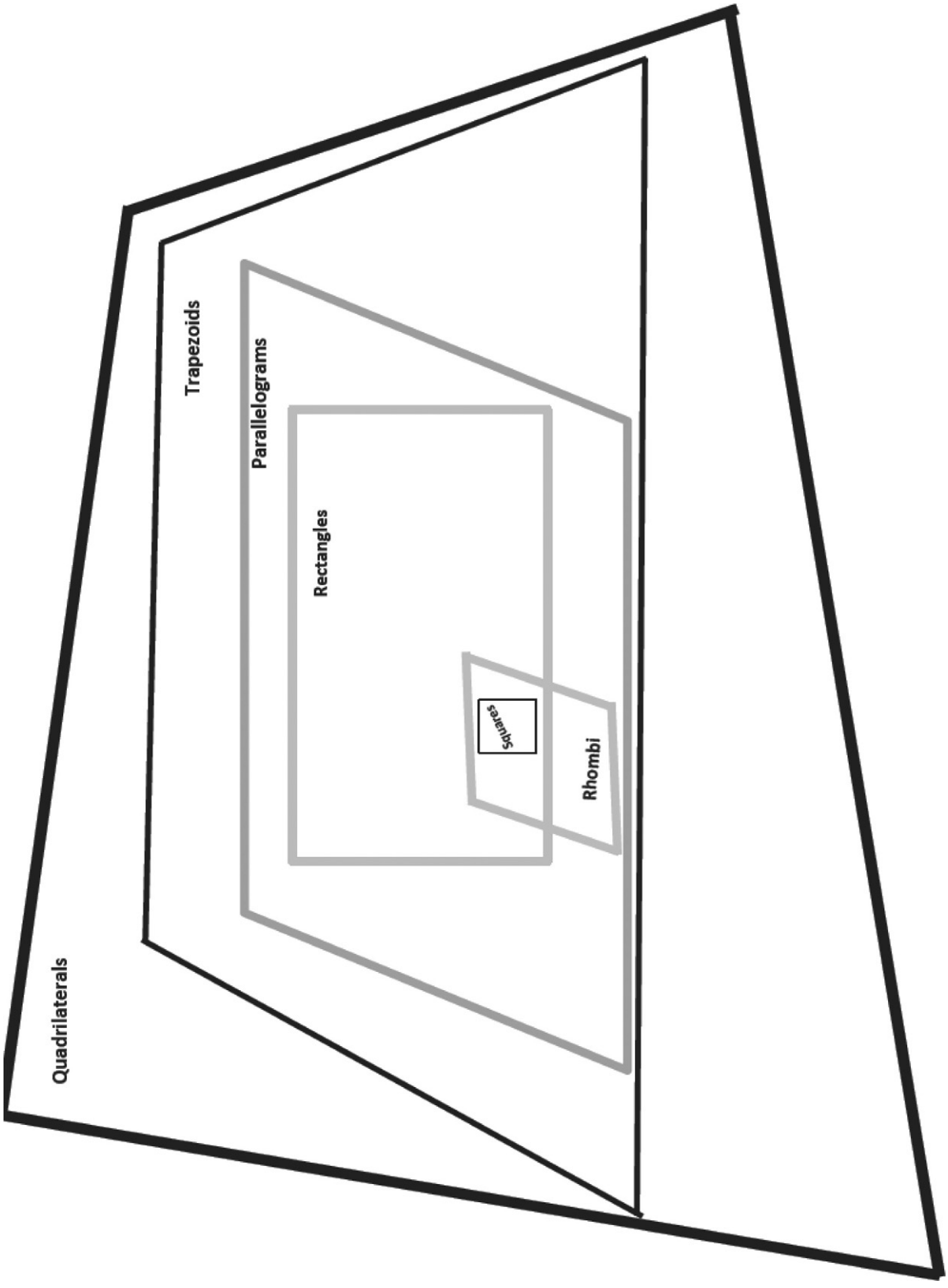
4. a. List the properties that are shared by all of the rhombuses that you worked with today.

   b. List the properties that are shared by all of the rectangles that you worked with today.

   c. When can a trapezoid also be called a rhombus?

   d. When can a parallelogram also be called a rectangle?

   e. When can a quadrilateral also be called a rhombus?




quadrilateral hierarchy with square

The teacher asked her class to draw parallelograms that are rectangles. Kylie drew Figure 1, and Zach drew Figure 2. Zach agrees that Kylie has drawn a parallelogram but says that it is not a rectangle. Is he correct? Use properties to justify your answer.

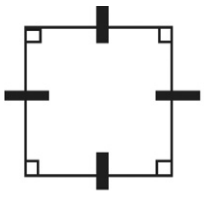


Figure 1

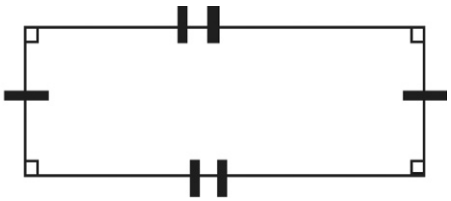


Figure 2

**Read** **Draw** **Write**

Name _____ Date _____

1. Draw the figures in each box with the attributes listed. If your figure has more than one name, write it in the box.

| | |
|---|---|
| a. Rhombus with 2 right angles | b. Kite with all sides equal |
| c. Kite with 4 right angles | d. Kite with 2 pairs of adjacent sides equal (The pairs are not equal to each other.) |

2. Use the figures you drew to complete the tasks below.

   a. Measure the angles of the figures with your protractor, and record the measurements on the figures.

   b. Use a marker or crayon to circle pairs of angles that are equal in measure, inside each figure. Use a different color for each pair.

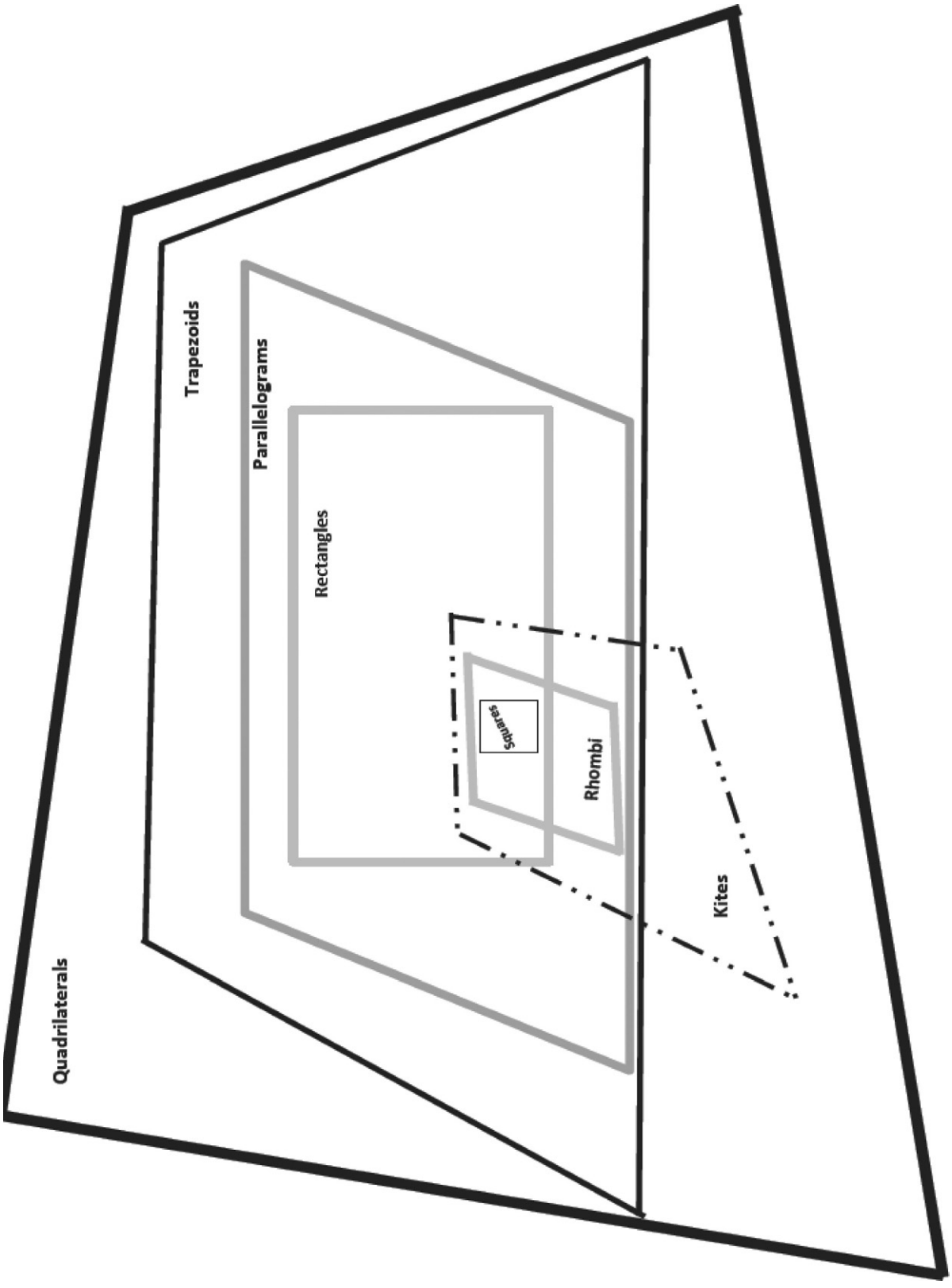
3. a. List the properties shared by all of the squares that you worked with today.

b. List the properties shared by all of the kites that you worked with today.

c. When can a rhombus also be called a square?

d. When can a kite also be called a square?

e. When can a trapezoid also be called a kite?




quadrilateral hierarchy with kite

Nita buys a rug that is $10\frac{3}{4}$ feet $\times 12\frac{1}{2}$ feet. What is the area of the rug? Show your thinking with an area model and a multiplication sentence.

**Read** **Draw** **Write**

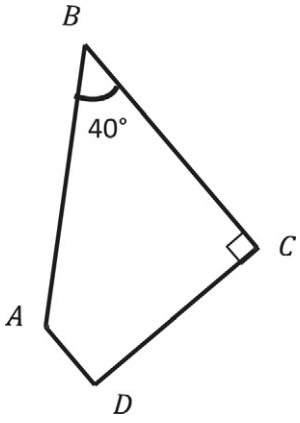
Name _____ Date _____

1. True or false. If the statement is false, rewrite it to make it true.

| | T | F |
|---|---|---|
| a. All trapezoids are quadrilaterals. | | |
| b. All parallelograms are rhombuses. | | |
| c. All squares are trapezoids. | | |
| d. All rectangles are squares. | | |
| e. Rectangles are always parallelograms. | | |
| f. All parallelograms are trapezoids. | | |
| g. All rhombuses are rectangles. | | |
| h. Kites are never rhombuses. | | |
| i. All squares are kites. | | |
| j. All kites are squares. | | |
| k. All rhombuses are squares. | | |

2. Fill in the blanks.

a. $ABCD$ is a trapezoid. Find the measurements listed below.




$\angle A$ = _____°

$\angle D$ = _____°

What other names does this figure have?

b. $RECT$ is a rectangle. Find the measurements listed below.

Line $TE$ = _____

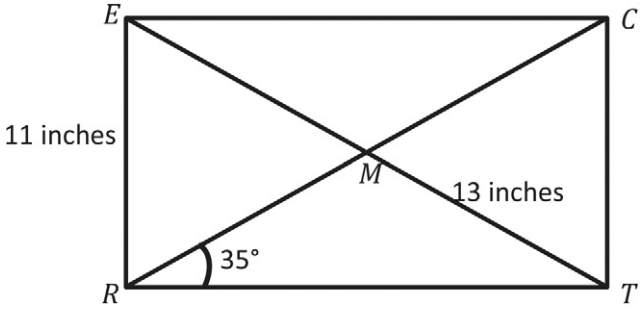
Line $RC$ = _____

Line $CT$ = _____

$\angle ERM$ = _____°

$\angle CTR$ = _____°

What other names does this figure have?




c. $PARL$ is a parallelogram. Find the measurements listed below.

Line $AL$ = _____

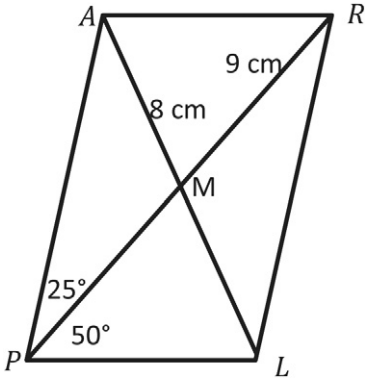
Line $PR$ = _____

$\angle ARL$ = _____°

$\angle PAR$ = _____°

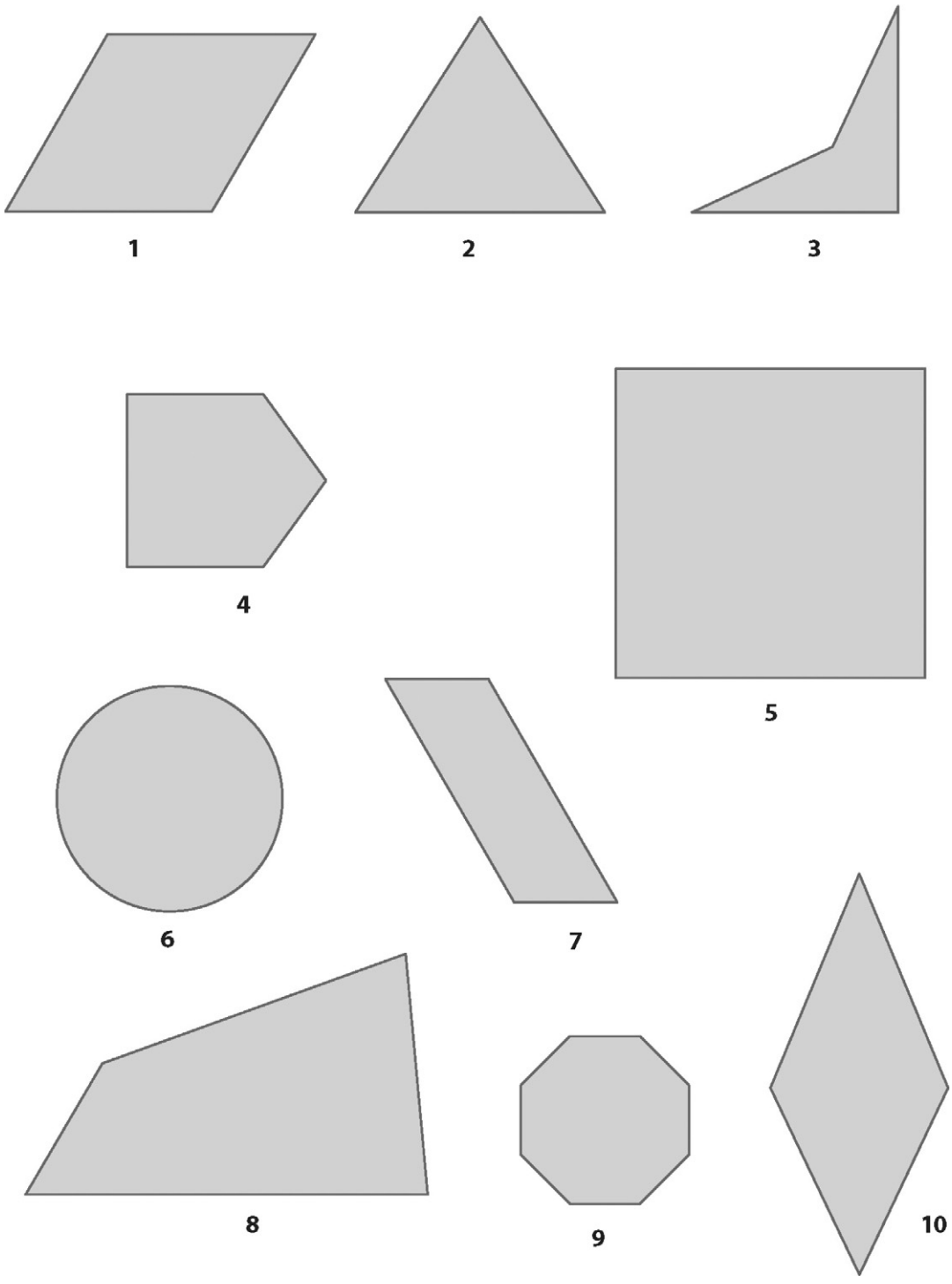
$\angle RLP$ = _____°

What other names does this figure have?

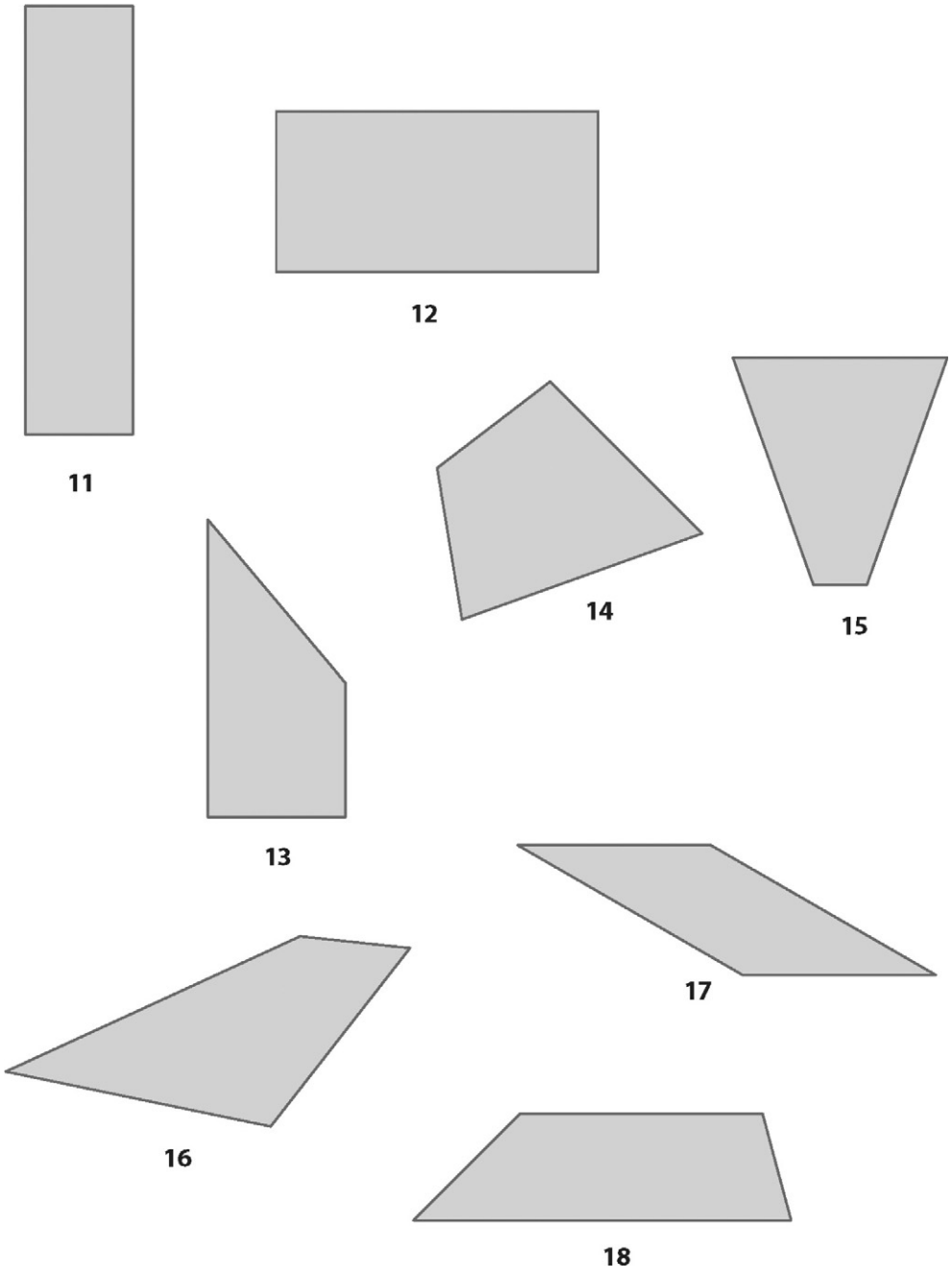


| | |
|---|---|
| **Quadrilaterals** | **Trapezoids** |
| **Parallelograms** | **Rectangles** |
| **Rhombuses** | **Kites** |
| **Squares** | **Polygons** |

shape name cards




shapes for sorting (page 1)




shapes for sorting (page 2)

Name _____ Date _____

1. Write the number on your task card and a summary of the task in the blank. Then, draw the figure in the box. Label your figure with as many names as you can. Circle the most specific name.

| | |
|---|---|
| Task #___: _____ | Task #___: _____ |
| Task #___: _____ | Task #___: _____ |
| Task #___: _____ | Task #___: _____ |

2. John says that because rhombuses do not have perpendicular sides, they cannot be rectangles. Explain his error in thinking.

3. Jack says that because kites do not have parallel sides, a square is not a kite. Explain his error in thinking.

| | | |
|---|---|---|
| Task 1:<br>Draw a trapezoid with a right angle. | Task 2:<br>Draw a rectangle with a length that is twice its width. | Task 3:<br>Draw a quadrilateral with 2 pairs of equal sides and no parallel sides. |
| Task 4:<br>Draw a rhombus with right angles. | Task 5:<br>Draw a parallelogram with two pairs of perpendicular sides. | Task 6:<br>Draw a rhombus with 4 equal angles. |

task cards (1–6)

| | | |
|---|---|---|
| Task 9: Draw a parallelogram with a side of 4 cm and a side of 6 cm. | Task 8: Draw a parallelogram with right angles. | Task 7: Draw a quadrilateral with four equal sides. |
| Task 12: Draw a rectangle that is also a rhombus. | Task 11: Draw a parallelogram with no right angles. | Task 10: Draw an isosceles trapezoid. |

task cards (7–12)

| | | |
|---|---|---|
| Task 13: Draw a quadrilateral that has at least one pair of equal opposite angles. | Task 14: Draw a quadrilateral that has only one pair of equal opposite angles. | Task 15: Draw a trapezoid with four right angles. |
| Task 16: Draw a kite that is also a parallelogram. | Task 17: Draw a parallelogram with a 60° angle. | Task 18: Draw a rectangle that is not a rhombus. |

task cards (13–18)

| | | |
|---|---|---|
| Task 19: Draw a rhombus that is not a rectangle. | Task 20: Draw a parallelogram that is not a rectangle. | Task 21: Draw a kite that is not a parallelogram. |
| Task 22: Draw a quadrilateral whose diagonals bisect each other at a right angle. | Task 23: Draw a trapezoid that is not a parallelogram. | Task 24: Draw a quadrilateral whose diagonals do not bisect each other. |

task cards (19–24)

Learn

# Eureka Math®

## Grade 5
## Module 6

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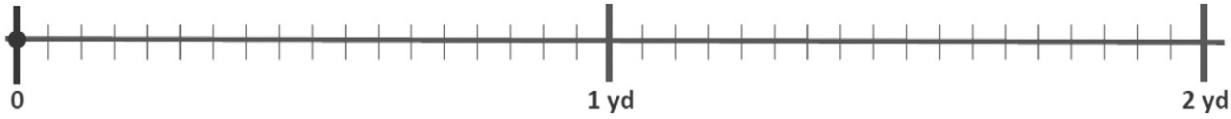
A landscaper is planting some marigolds in a row. The row is 2 yards long. The flowers must be spaced $\frac{1}{3}$ yard apart so that they will have proper room to grow. The landscaper plants the first flower at 0. Place points on the number line to show where the landscaper should place the other flowers. How many marigolds will fit in this row?



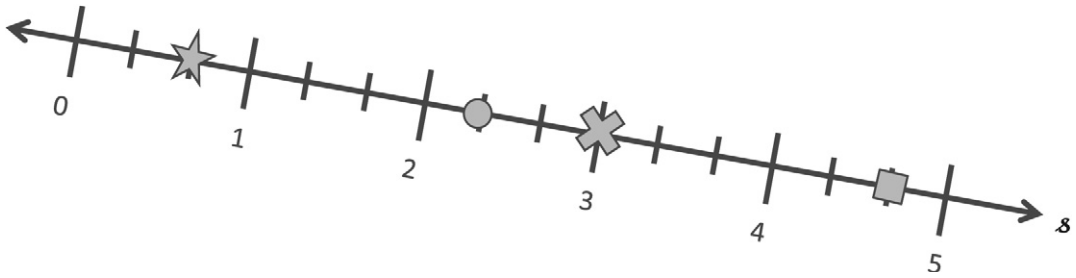

**Read** **Draw** **Write**

Name _____ Date _____

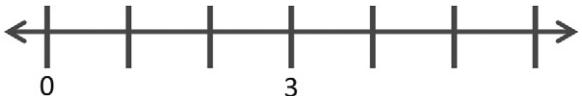
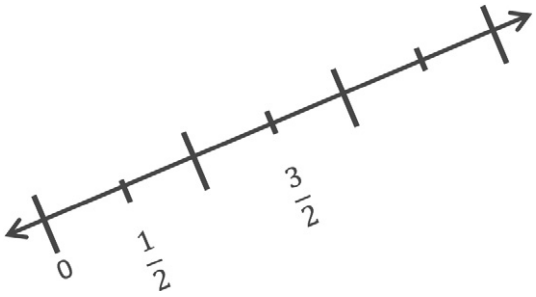
1. Each shape was placed at a point on the number line $s$. Give the coordinate of each point below.

a. ✖ _____ b. ★ _____

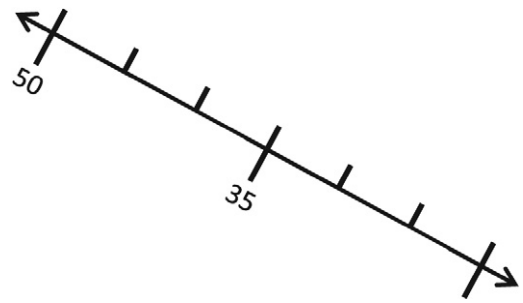
c. ● _____ d. ■ _____




2. Plot the points on the number lines.

| a. | b. |
|---|---|
|   Plot $A$ so that its distance from the origin is 2. |   Plot $R$ so that its distance from the origin is $\frac{5}{2}$. |

c.

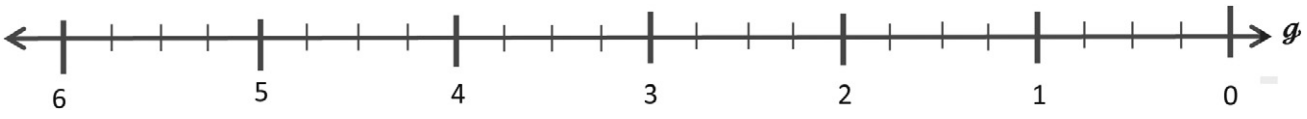



Plot $L$ so that its distance from the origin is 20.

d.


Plot a point $T$ so that its distance from the origin is $\frac{2}{3}$ more than that of $S$.

3. Number line $g$ is labeled from 0 to 6. Use number line $g$ below to answer the questions.




a. Plot point $A$ at $\frac{3}{4}$.

b. Label a point that lies at $4\frac{1}{2}$ as $B$.

c. Label a point, $C$, whose distance from zero is 5 more than that of $A$.

The coordinate of $C$ is _____.

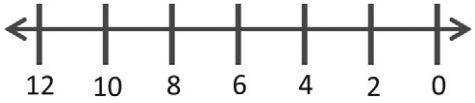
d. Plot a point, $D$, whose distance from zero is $1\frac{1}{4}$ less than that of $B$.

The coordinate of $D$ is _____.

e. The distance of $E$ from zero is $1\frac{3}{4}$ more than that of $D$. Plot point $E$.

f. What is the coordinate of the point that lies halfway between $A$ and $D$? _____
Label this point $F$.

4. Mrs. Fan asked her fifth-grade class to create a number line. Lenox created the number line below:



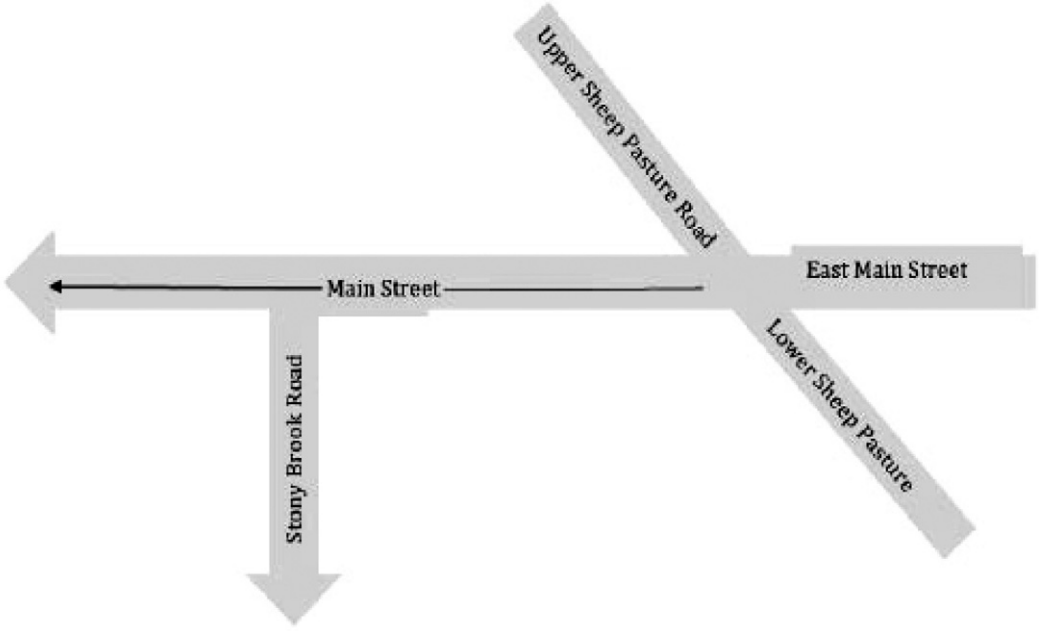

Parks said Lenox's number line is wrong because numbers should always increase from left to right. Who is correct? Explain your thinking.

5. A pirate marked the palm tree on his treasure map and buried his treasure 30 feet away. Do you think he will be able to easily find his treasure when he returns? Why or why not? What might he do to make it easier to find?

The picture shows an intersection in Stony Brook Village.

a. The town wants to construct two new roads, Elm Street and King Street. Elm Street will intersect Lower Sheep Pasture Road, run parallel to Main Street, and be perpendicular to Stony Brook Road. Sketch Elm Street.

b. King Street will be perpendicular to Main Street and begin at the intersection of Upper Sheep Pasture Road and East Main Street. Sketch King Street.

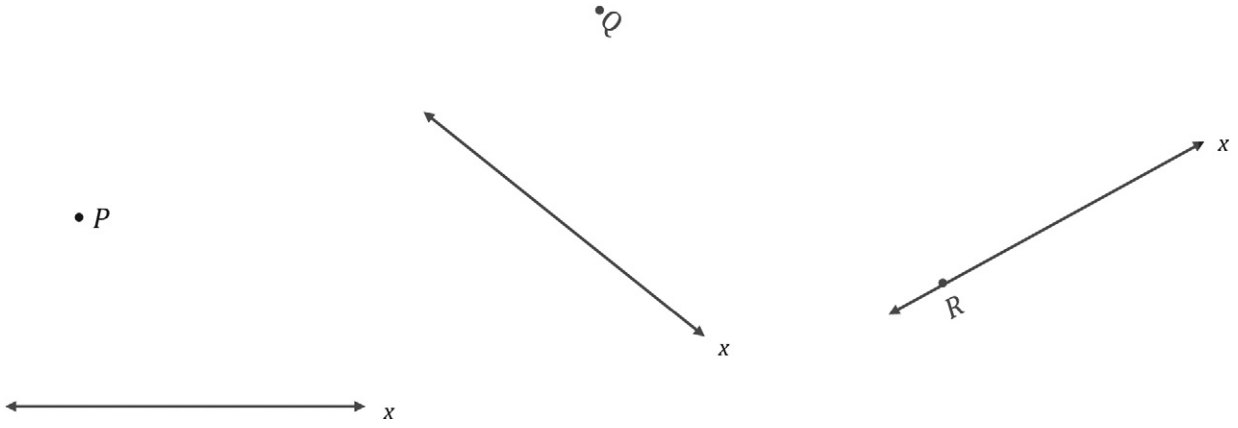



**Read** **Draw** **Write**

Name _____ Date _____

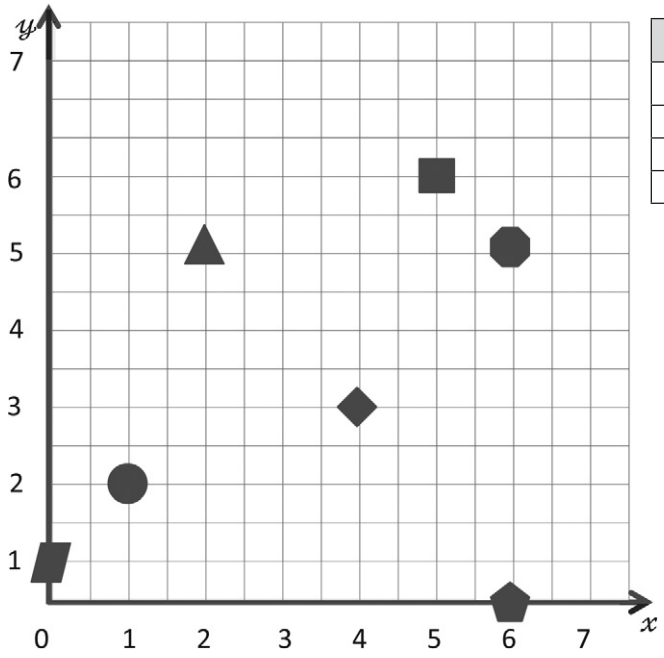
1.

a. Use a set square to draw a line perpendicular to the $x$-axes through points $P$, $Q$, and $R$. Label the new line as the $y$-axis.




a. Choose one of the sets of perpendicular lines above, and create a coordinate plane. Mark 7 units on each axis, and label them as whole numbers.

2. Use the coordinate plane to answer the following.




a. Name the shape at each location.

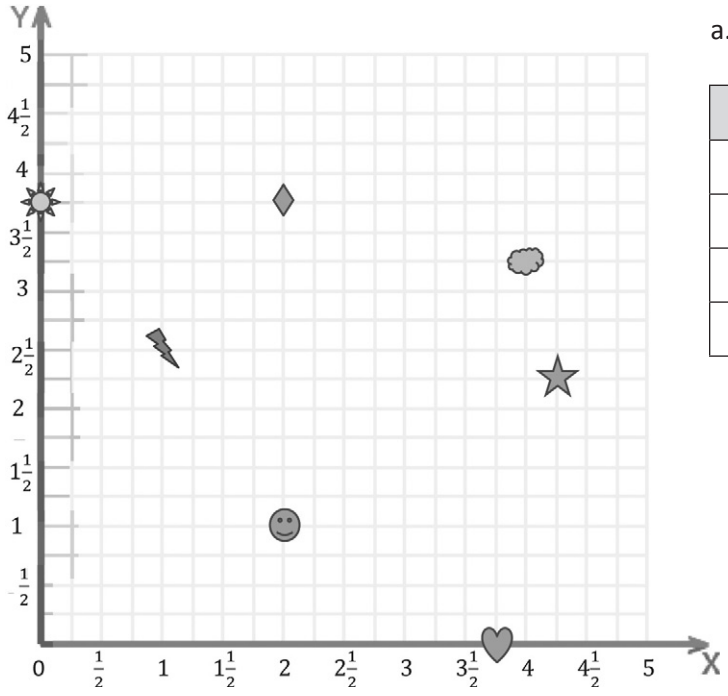
| $x$-coordinate | $y$-coordinate | Shape |
|---|---|---|
| 2 | 5 | |
| 1 | 2 | |
| 5 | 6 | |
| 6 | 5 | |

b. Which shape is 2 units from the $y$-axis?

c. Which shape has an $x$-coordinate of 0?

d. Which shape is 4 units from the $y$-axis and 3 units from the $x$-axis?

3. Use the coordinate plane to answer the following.




a. Fill in the blanks.

| Shape | $x$-coordinate | $y$-coordinate |
|---|---|---|
| Smiley Face | | |
| Diamond | | |
| Sun | | |
| Heart | | |

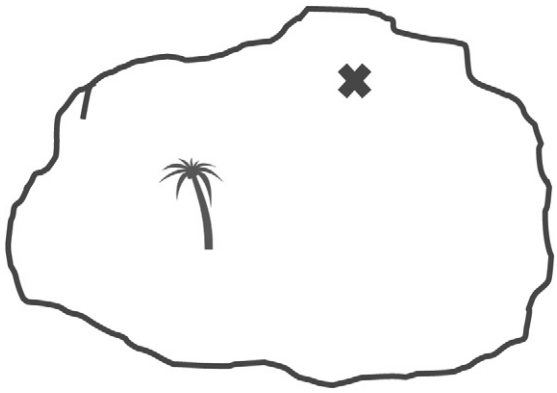
b. Name the shape whose $x$-coordinate is $\frac{1}{2}$ more than the value of the heart's $x$-coordinate.

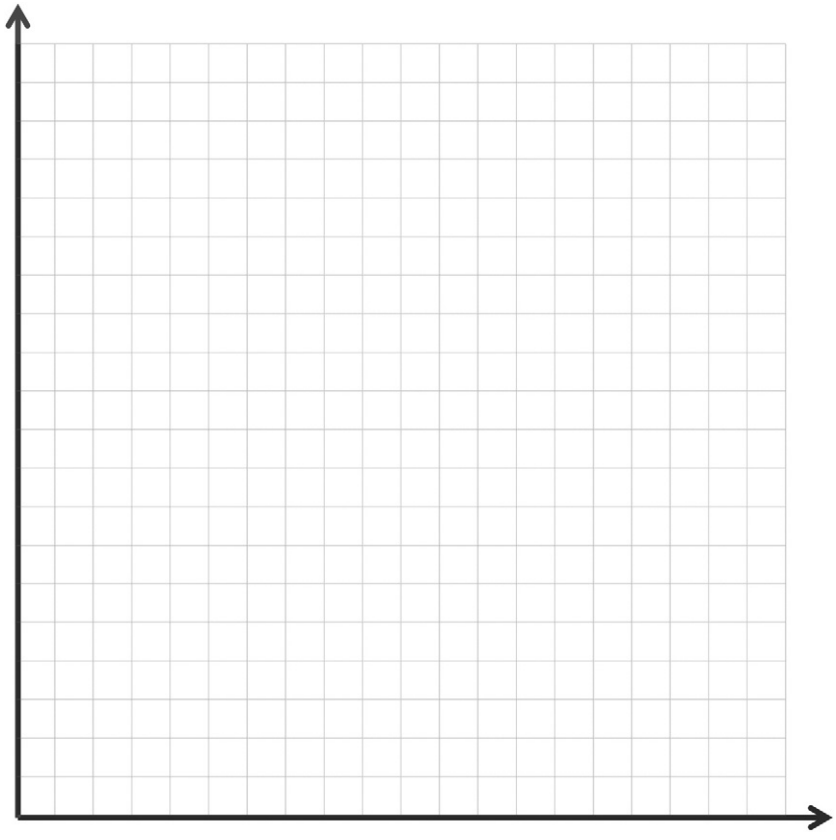
c. Plot a triangle at (3, 4).

d. Plot a square at ($4\frac{3}{4}$, 5).

e. Plot an X at ($\frac{1}{2}$, $\frac{3}{4}$).

4. The pirate's treasure is buried at the ✖ on the map. How could a coordinate plane make describing its location easier?





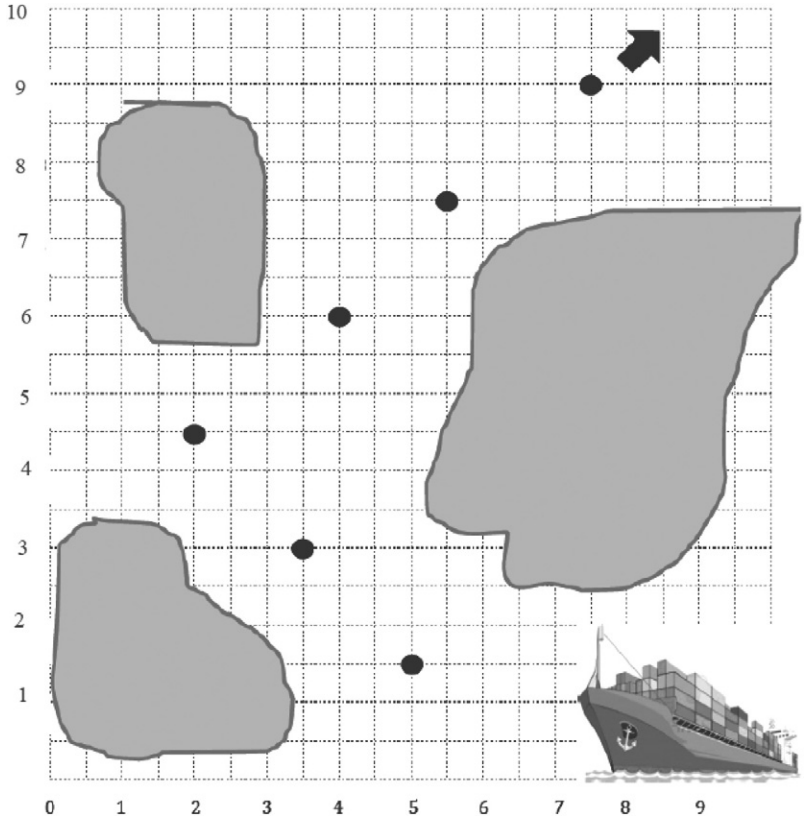
coordinate plane

The captain of a ship has a chart to help him navigate through the islands. He must follow points that show the deepest part of the channel. List the coordinates the captain needs to follow in the order he will encounter them.

1. (____, ____) 2. (____, ____)

3. (____, ____) 4. (____, ____)

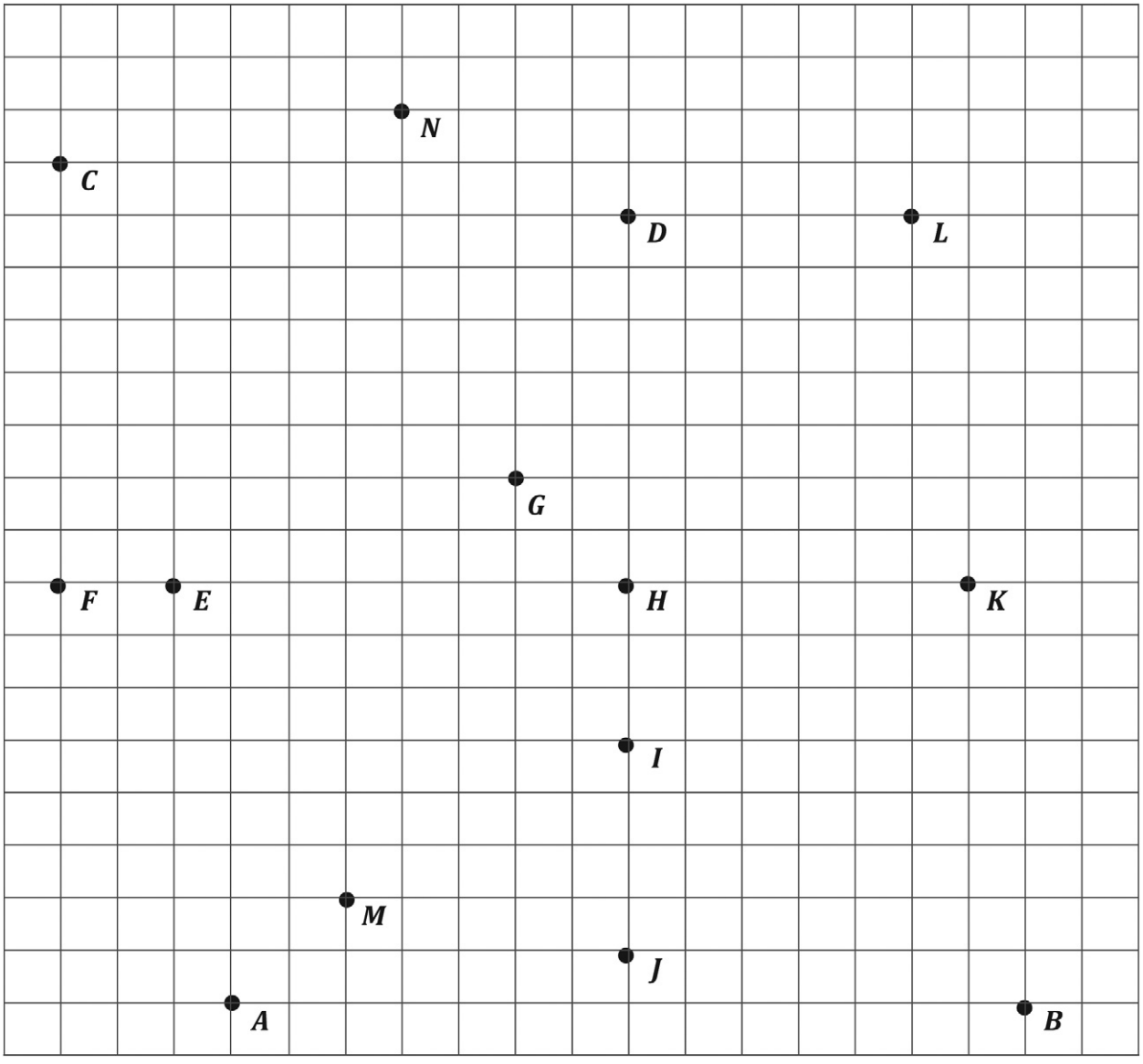
5. (____, ____) 6. (____, ____)




**Read** **Draw** **Write**

Name _____ Date _____

1. Use the grid below to complete the following tasks.
   a. Construct an $x$-axis that passes through points $A$ and $B$.
   b. Construct a perpendicular $y$-axis that passes through points $C$ and $F$.
   c. Label the origin as 0.
   d. The $x$-coordinate of $B$ is $5\frac{2}{3}$. Label the whole numbers along the $x$-axis.
   e. The $y$-coordinate of $C$ is $5\frac{1}{3}$. Label the whole numbers along the $y$-axis.



2. For all of the following problems, consider the points $A$ through $N$ on the previous page.

   a. Identify all of the points that have an $x$-coordinate of $3\frac{1}{3}$.

   b. Identify all of the points that have a $y$-coordinate of $2\frac{2}{3}$.

   c. Which point is $3\frac{1}{3}$ units above the $x$-axis *and* $2\frac{2}{3}$ units to the right of the $y$-axis? Name the point, and give its coordinate pair.

   d. Which point is located $5\frac{1}{3}$ units from the $y$-axis?

   e. Which point is located $1\frac{2}{3}$ units along the $x$-axis?

   f. Give the coordinate pair for each of the following points.

   $K$: _____ $I$: _____ $B$: _____ $C$: _____

   g. Name the points located at the following coordinates.

   $(1\frac{2}{3}, \frac{2}{3})$ _____ $(0, 2\frac{2}{3})$ _____ (1, 0) _____ $(2, 5\frac{2}{3})$ _____

   h. Which point has an equal $x$- and $y$-coordinate? _____

   i. Give the coordinates for the intersection of the two axes. (____, ____) Another name for this point on the plane is the _____.

   j. Plot the following points.

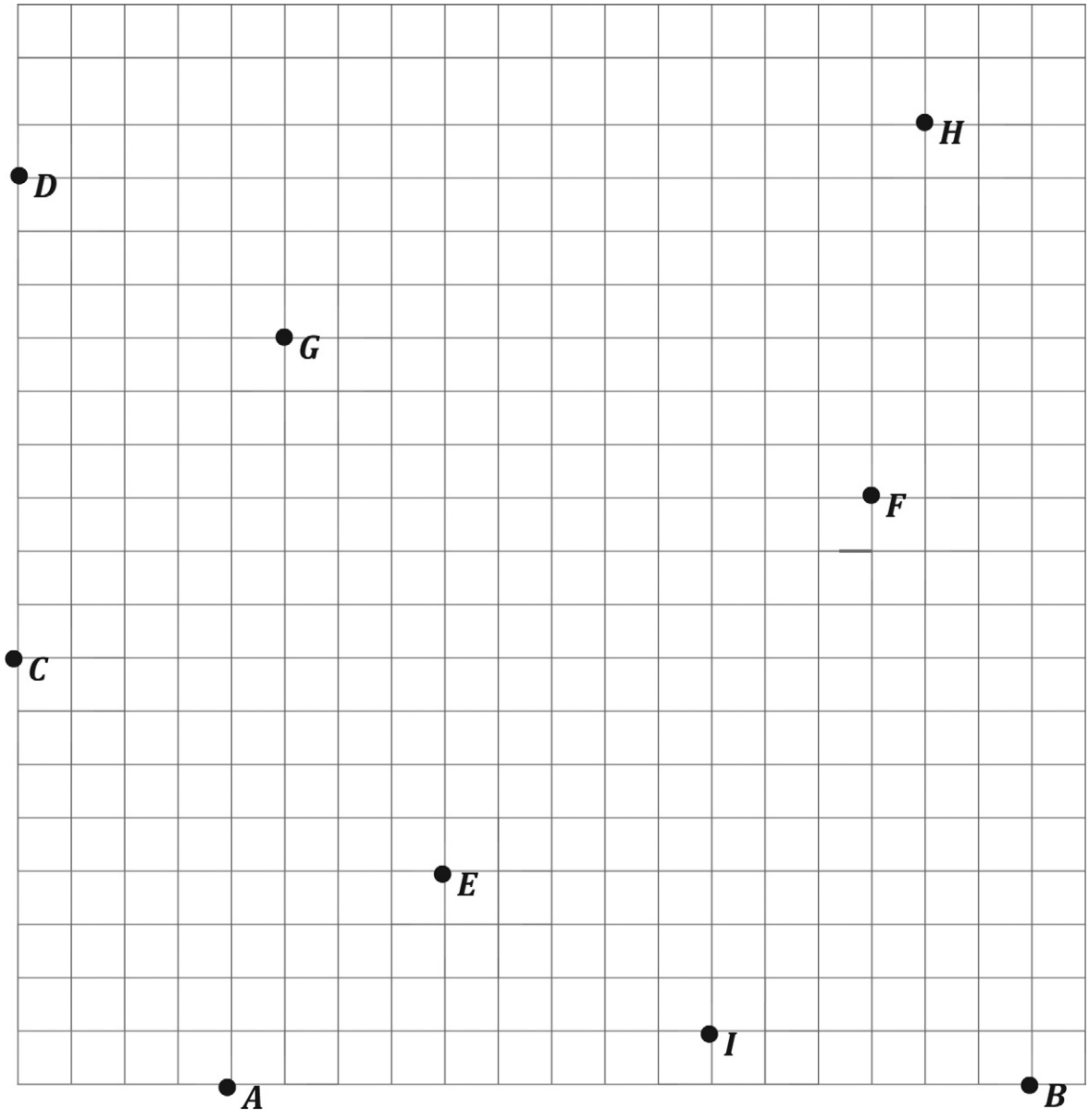
   $P$: $(4\frac{1}{3}, 4)$ $Q$: $(\frac{1}{3}, 6)$ $R$: $(4\frac{2}{3}, 1)$ $S$: $(0, 1\frac{2}{3})$

   k. What is the distance between $E$ and $H$, or $EH$?

l. What is the length of $HD$?

m. Would the length of $ED$ be greater or less than $EH + HD$?

n. Jack was absent when the teacher explained how to describe the location of a point on the coordinate plane. Explain it to him using point $J$.




unlabeled coordinate plane

Violet and Magnolia are shopping for boxes to organize the materials for their design company. Magnolia wants to get small boxes, which measure 16 in × 10 in × 7 in. Violet wants to get large boxes, which measure 32 in × 20 in × 14 in. How many small boxes will equal the volume of four large boxes?

**Read** **Draw** **Write**

# Battleship Rules

**Goal**: To sink all of your opponent's ships by correctly guessing their coordinates.

## Materials

- 1 grid sheet (per person/per game)
- Red crayon/marker for hits
- Black crayon/marker for misses
- Folder to place between players

## Ships

- Each player must mark 5 ships on the grid.
  - Aircraft carrier—plot 5 points.
  - Battleship—plot 4 points.
  - Cruiser—plot 3 points.
  - Submarine—plot 3 points.
  - Patrol boat—plot 2 points.

## Setup

- With your opponent, choose a unit length and fractional unit for the coordinate plane.
- Label the chosen units on both grid sheets.
- Secretly select locations for each of the 5 ships on your My Ships grid.
  - All ships must be placed horizontally or vertically on the coordinate plane.
  - Ships can touch each other, but they may not occupy the same coordinate.

## Play

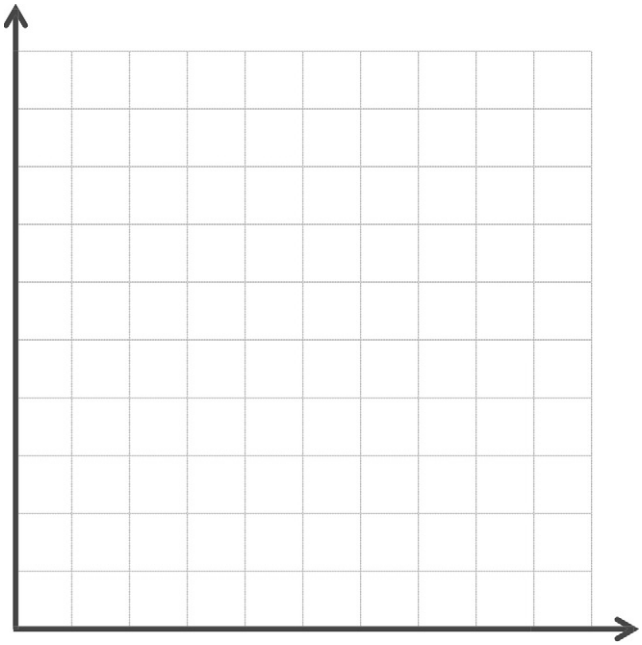
- Players take turns firing one shot to attack enemy ships.
- On your turn, call out the coordinates of your attacking shot. Record the coordinates of each attack shot.
- Your opponent checks his/her My Ships grid. If that coordinate is unoccupied, your opponent says, "Miss." If you named a coordinate occupied by a ship, your opponent says, "Hit."
- Mark each attempted shot on your Enemy Ships grid. Mark a black ✖ on the coordinate if your opponent says, "Miss." Mark a red ✓ on the coordinate if your opponent says, "Hit."
- On your opponent's turn, if he/she hits one of your ships, mark a red ✓ on that coordinate of your My Ships grid. When one of your ships has every coordinate marked with a ✓, say, "You've sunk my [name of ship]."

## Victory

- The first player to sink all (or the most) opposing ships, wins.

### My Ships

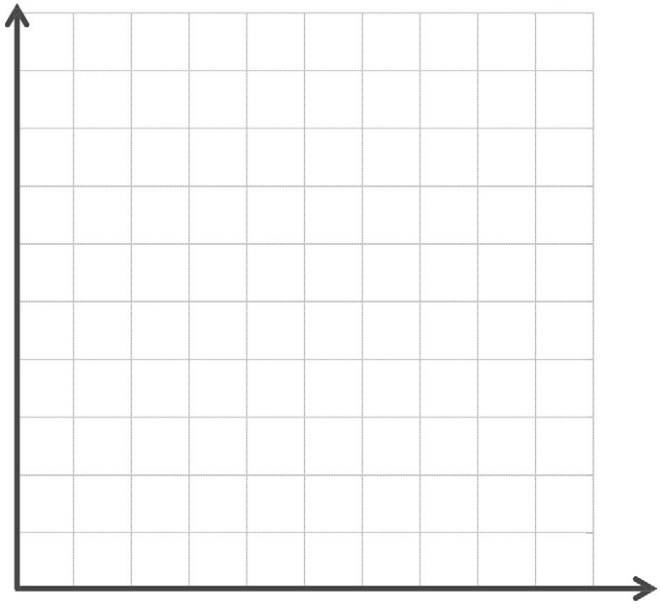
- Draw a red ✓ over any coordinate your opponent hits.
- Once all of the coordinates of any ship have been hit, say, "You've sunk my [name of ship]."



Aircraft carrier—5 points
Battleship—4 points
Cruiser—3 points
Submarine—3 points
Patrol boat—2 points

### Enemy Ships

- Draw a black ✖ on the coordinate if your opponent says, "Miss."
- Draw a red ✓ on the coordinate if your opponent says, "Hit."
- Draw a circle around the coordinates of a sunken ship.



### Attack Shots

- Record the coordinates of each shot below and whether it was a ✓ (hit) or an ✖ (miss).

| | |
|---|---|
| (_____, _____) | (_____, _____) |
| (_____, _____) | (_____, _____) |
| (_____, _____) | (_____, _____) |
| (_____, _____) | (_____, _____) |
| (_____, _____) | (_____, _____) |
| (_____, _____) | (_____, _____) |
| (_____, _____) | (_____, _____) |
| (_____, _____) | (_____, _____) |

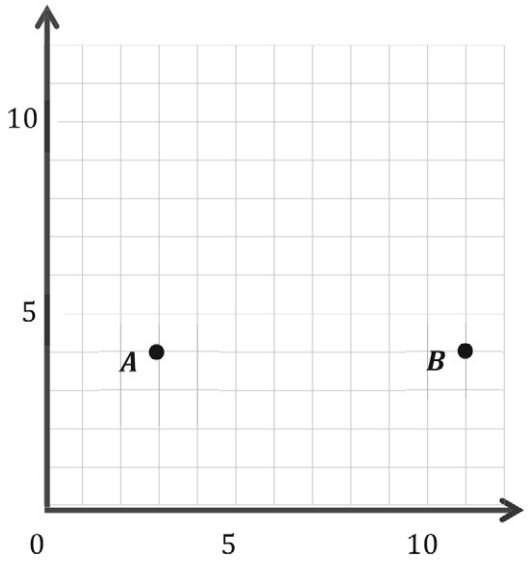
A company has developed a new game. Cartons are needed to ship 40 games at a time. Each game is 2 inches high by 7 inches wide by 14 inches long.

How would you recommend packing the board games in the carton? What are the dimensions of a carton that could ship 40 board games with no extra room in the box?

**Read** **Draw** **Write**

Name _____ Date _____

1. Use the coordinate plane to the right to answer the following questions.




   a. Use a straightedge to construct a line that goes through points $A$ and $B$. Label the line $e$.

   b. Line $e$ is parallel to the _____-axis and is perpendicular to the _____-axis.

   c. Plot two more points on line $e$. Name them $C$ and $D$.

   d. Give the coordinates of each point below.

      $A$: _____ $B$: _____

      $C$: _____ $D$: _____

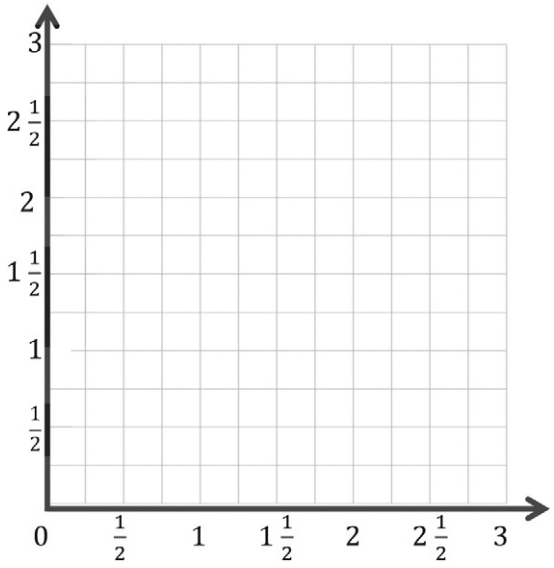
   e. What do all of the points of line $e$ have in common?

   f. Give the coordinates of another point that would fall on line $e$ with an $x$-coordinate greater than 15.

2. Plot the following points on the coordinate plane to the right.

$P$: $(1\frac{1}{2}, \frac{1}{2})$ $Q$: $(1\frac{1}{2}, 2\frac{1}{2})$

$R$: $(1\frac{1}{2}, 1\frac{1}{4})$ $S$: $(1\frac{1}{2}, \frac{3}{4})$




a. Use a straightedge to draw a line to connect these points. Label the line $\mathcal{h}$.

b. In line $\mathcal{h}$, $x$ = _____ for all values of $y$.

c. Circle the correct word.

Line $\mathcal{h}$ is *parallel* *perpendicular* to the $x$-axis.

Line $\mathcal{h}$ is *parallel* *perpendicular* to the $y$-axis.

d. What pattern occurs in the coordinate pairs that let you know that line $\mathcal{h}$ is vertical?

3. For each pair of points below, think about the line that joins them. For which pairs is the line parallel to the $x$-axis? Circle your answer(s). Without plotting them, explain how you know.

a. (1.4, 2.2) and (4.1, 2.4) b. (3, 9) and (8, 9) c. $(1\frac{1}{4}, 2)$ and $(1\frac{1}{4}, 8)$

4. For each pair of points below, think about the line that joins them. For which pairs is the line parallel to the $y$-axis? Circle your answer(s). Then, give 2 other coordinate pairs that would also fall on this line.

a. (4, 12) and (6, 12) b. $(\frac{3}{5}, 2\frac{3}{5})$ and $(\frac{1}{5}, 3\frac{1}{5})$ c. (0.8, 1.9) and (0.8, 2.3)

5. Write the coordinate pairs of 3 points that can be connected to construct a line that is $5\frac{1}{2}$ units to the right of and parallel to the $y$-axis.

   a. _____ b. _____ c. _____

6. Write the coordinate pairs of 3 points that lie on the $x$-axis.

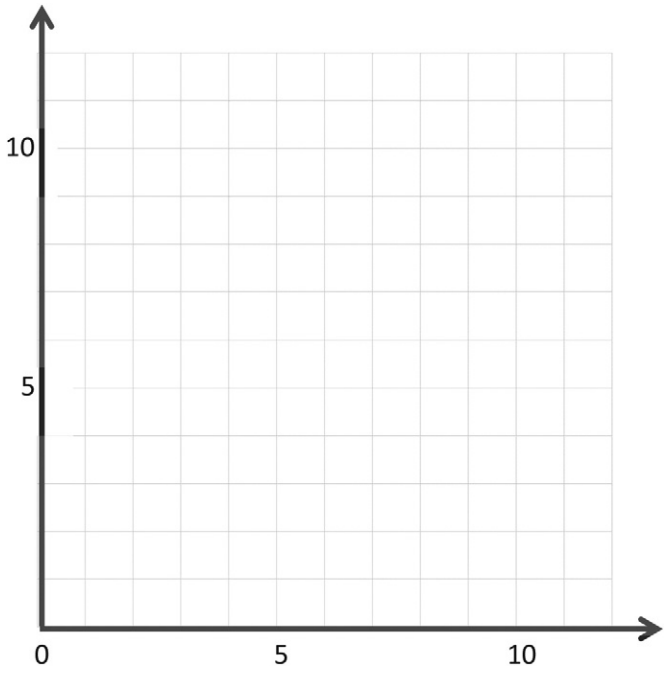
   a. _____ b. _____ c. _____

7. Adam and Janice are playing Battleship. Presented in the table is a record of Adam's guesses so far.
   He has hit Janice's battleship using these coordinate pairs. What should he guess next? How do you know? Explain using words and pictures.

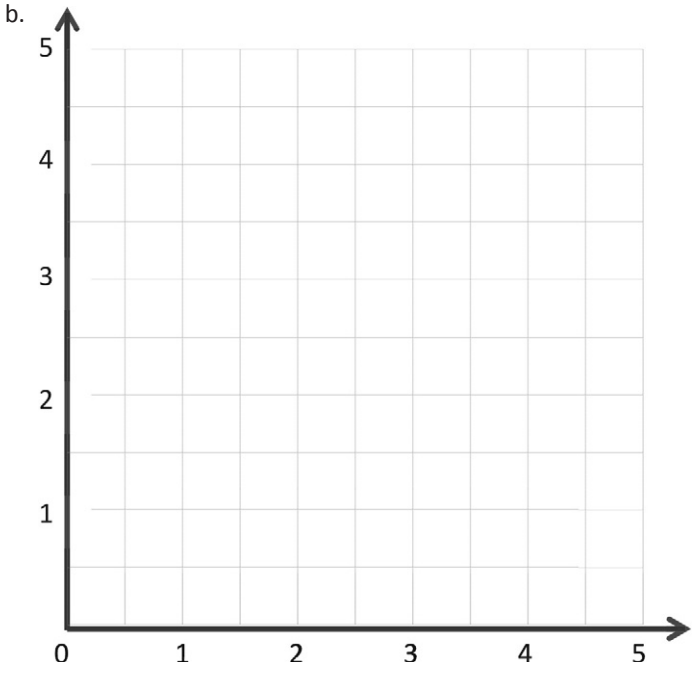
| | |
|---|---|
| (3, 11) | hit |
| (2, 11) | miss |
| (3, 10) | hit |
| (4, 11) | miss |
| (3, 9) | miss |

| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $H$ | | | |
| $I$ | | | |
| $J$ | | | |
| $K$ | | | |
| $L$ | | | |

a.




b.




| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $D$ | $2\frac{1}{2}$ | 0 | $(2\frac{1}{2}, 0)$ |
| $E$ | $2\frac{1}{2}$ | 2 | $(2\frac{1}{2}, 2)$ |
| $F$ | $2\frac{1}{2}$ | 4 | $(2\frac{1}{2}, 4)$ |

coordinate plane practice

Adam built a toy box for his children's wooden blocks.

a. If the inside dimensions of the box are 18 inches by 12 inches by 6 inches, what is the maximum number of 2-inch wooden cubes that will fit in the toy box?

b. What if Adam had built the box 16 inches by 9 inches by 9 inches? What is the maximum number of 2-inch wooden cubes that would fit in this size box?

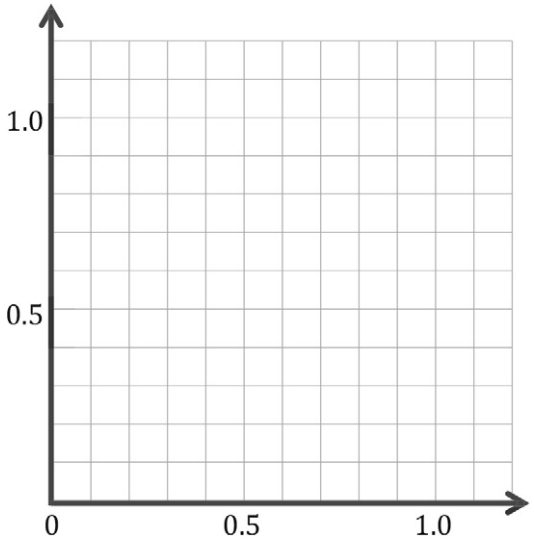
**Read** **Draw** **Write**

Name _____ Date _____

1. Plot the following points, and label them on the coordinate plane.

$A$: (0.3, 0.1) $B$: (0.3, 0.7)

$C$: (0.2, 0.9) $D$: (0.4, 0.9)




a. Use a straightedge to construct line segments $\overline{AB}$ and $\overline{CD}$.

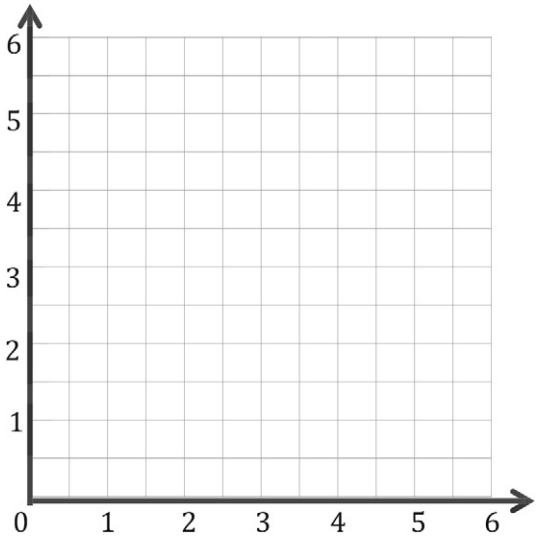
b. Line segment _____ is parallel to the $x$-axis and is perpendicular to the $y$-axis.

c. Line segment _____ is parallel to the $y$-axis and is perpendicular to the $x$-axis.

d. Plot a point on line segment $\overline{AB}$ that is not at the endpoints, and name it $U$. Write the coordinates. $U$ (_____, _____)

e. Plot a point on line segment $\overline{CD}$, and name it $V$. Write the coordinates. $V$ (_____, _____)

2. Construct line $f$ such that the $y$-coordinate of every point is $3\frac{1}{2}$, and construct line $g$ such that the $x$-coordinate of every point is $4\frac{1}{2}$.




a. Line $f$ is _____ units from the $x$-axis.

b. Give the coordinates of the point on line $f$ that is $\frac{1}{2}$ unit from the $y$-axis. _____

c. With a blue pencil, shade the portion of the grid that is less than $3\frac{1}{2}$ units from the $x$-axis.

d. Line $g$ is _____ units from the $y$-axis.

e. Give the coordinates of the point on line $g$ that is 5 units from the $x$-axis. _____

f. With a red pencil, shade the portion of the grid that is more than $4\frac{1}{2}$ units from the $y$-axis.

3. Complete the following tasks on the plane below.

   a. Construct a line $m$ that is perpendicular to the $x$-axis and 3.2 units from the $y$-axis.

   b. Construct a line $a$ that is 0.8 unit from the $x$-axis.

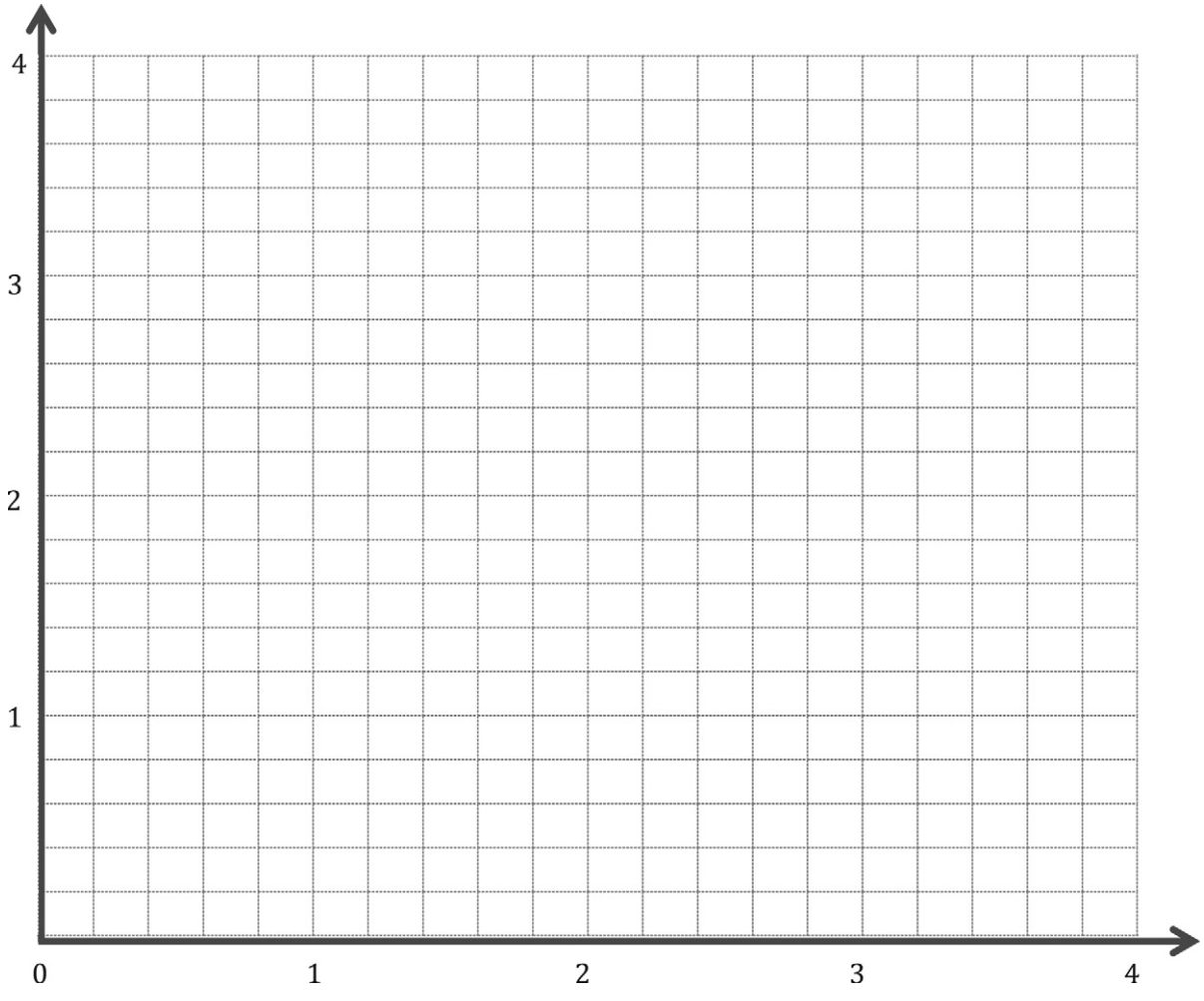
   c. Construct a line $t$ that is parallel to line $m$ and is halfway between line $m$ and the $y$-axis.

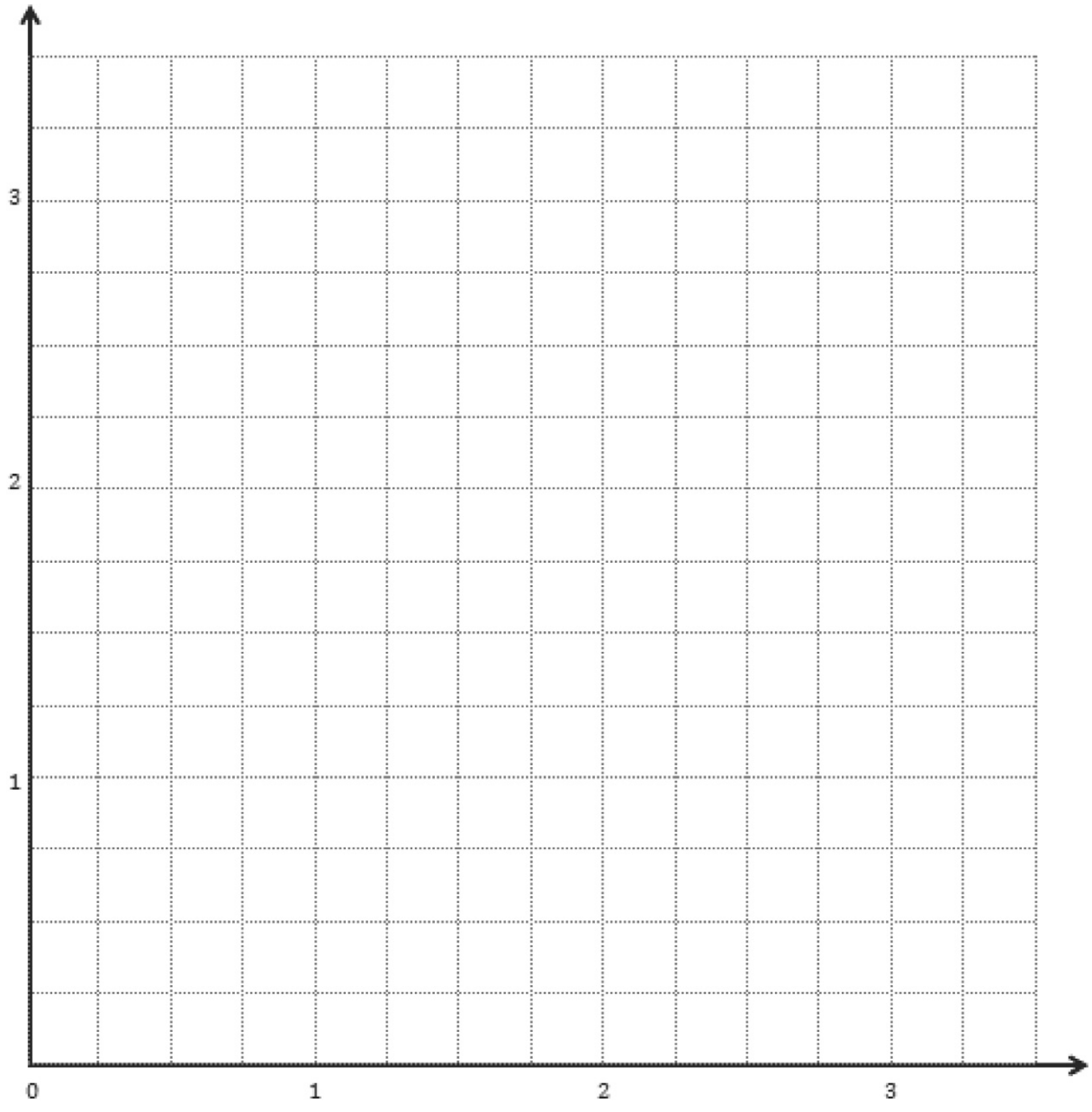
   d. Construct a line $h$ that is perpendicular to line $t$ and passes through the point (1.2, 2.4).

   e. Using a blue pencil, shade the region that contains points that are more than 1.6 units and less than 3.2 units from the $y$-axis.

   f. Using a red pencil, shade the region that contains points that are more than 0.8 unit and less than 2.4 units from the $x$-axis.

   g. Give the coordinates of a point that lies in the double-shaded region.






| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $A$ | | | |
| $B$ | | | |
| $C$ | | | |

| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $D$ | | | |
| $E$ | | | |
| $F$ | | | |

coordinate plane

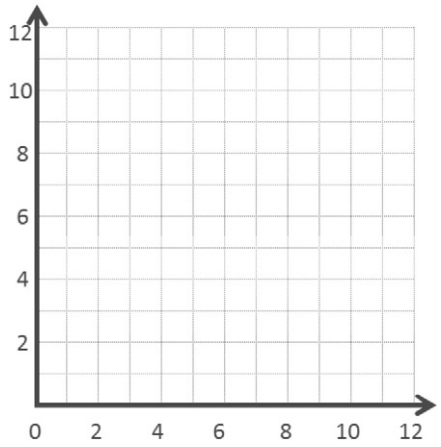
An orchard charges $0.85 to ship a quarter kilogram of grapefruit. Each grapefruit weighs approximately 165 grams. How much will it cost to ship 40 grapefruits?

**Read** **Draw** **Write**

Name _____ Date _____

1. Complete the chart. Then, plot the points on the coordinate plane below.

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 0 | 1 | (0, 1) |
| 2 | 3 | |
| 4 | 5 | |
| 6 | 7 | |



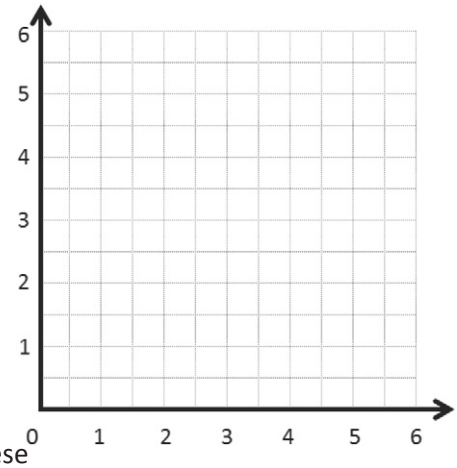

a. Use a straightedge to draw a line connecting these points.

b. Write a rule showing the relationship between the $x$- and $y$-coordinates of points on the line.

c. Name 2 other points that are on this line. _____ _____

2. Complete the chart. Then, plot the points on the coordinate plane below.

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| $\frac{1}{2}$ | 1 | |
| 1 | 2 | |
| $1\frac{1}{2}$ | 3 | |
| 2 | 4 | |

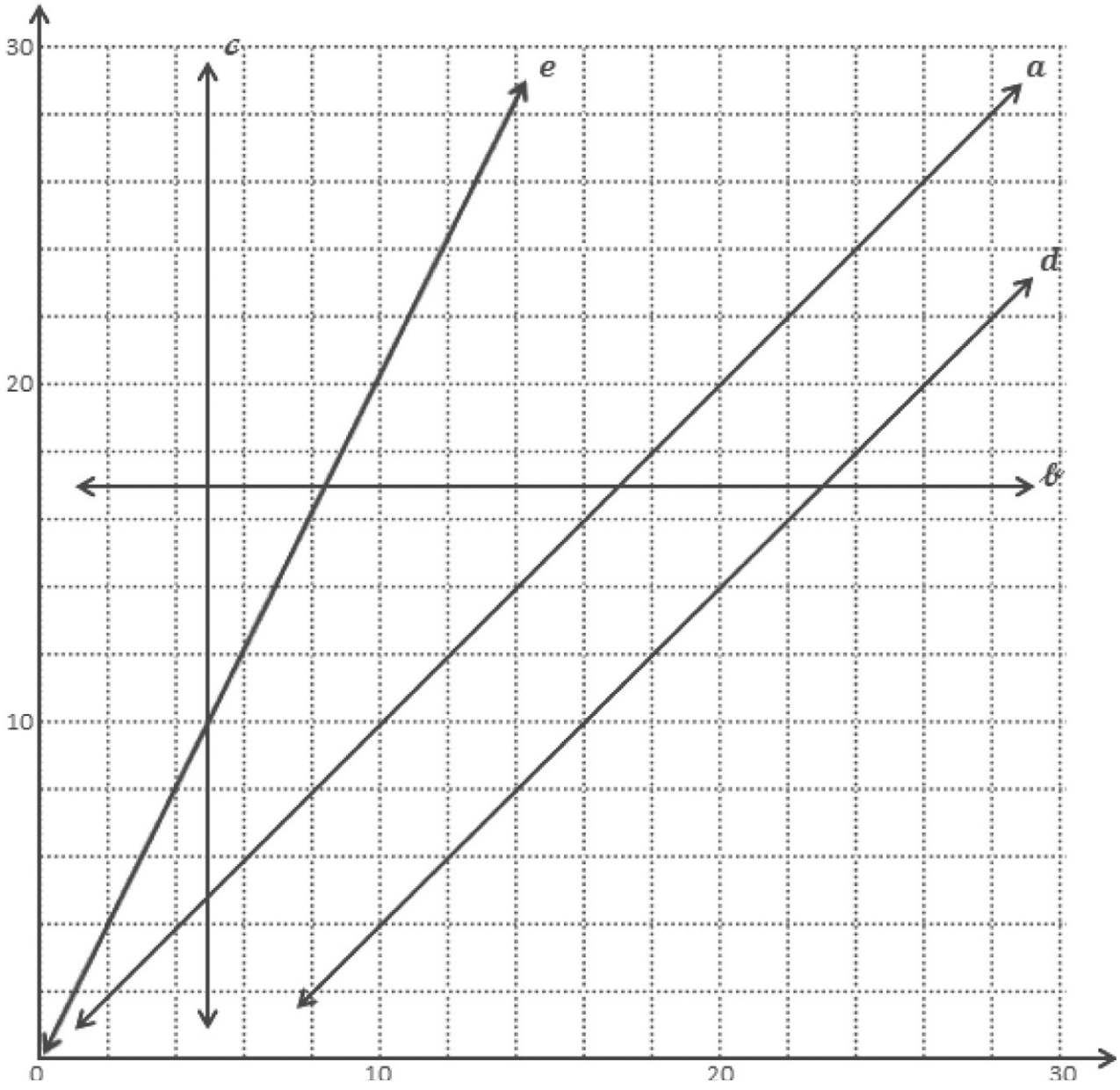



a. Use a straightedge to draw a line connecting these points.

b. Write a rule showing the relationship between the $x$- and $y$-coordinates.

c. Name 2 other points that are on this line. _____ _____

3. Use the coordinate plane below to answer the following questions.




a. Give the coordinates for 3 points that are on line $a$. _____ _____ _____

b. Write a rule that describes the relationship between the $x$- and $y$-coordinates for the points on line $a$.

c. What do you notice about the $y$-coordinates of every point on line $\mathscr{b}$?

d. Fill in the missing coordinates for points on line $d$.

(12, _____) (6, _____) (_____, 24) (28, _____) (_____, 28)

e. For any point on line $c$, the $x$-coordinate is _____.

f. Each of the points lies on at least 1 of the lines shown in the plane on the previous page. Identify a line that contains each of the following points.

i. (7, 7) ___$a$___ ii. (14, 8) _____ iii. (5, 10) _____

iv. (0, 17) _____ v. (15.3, 9.3) _____ vi. (20, 40) _____

Name _____ Date _____

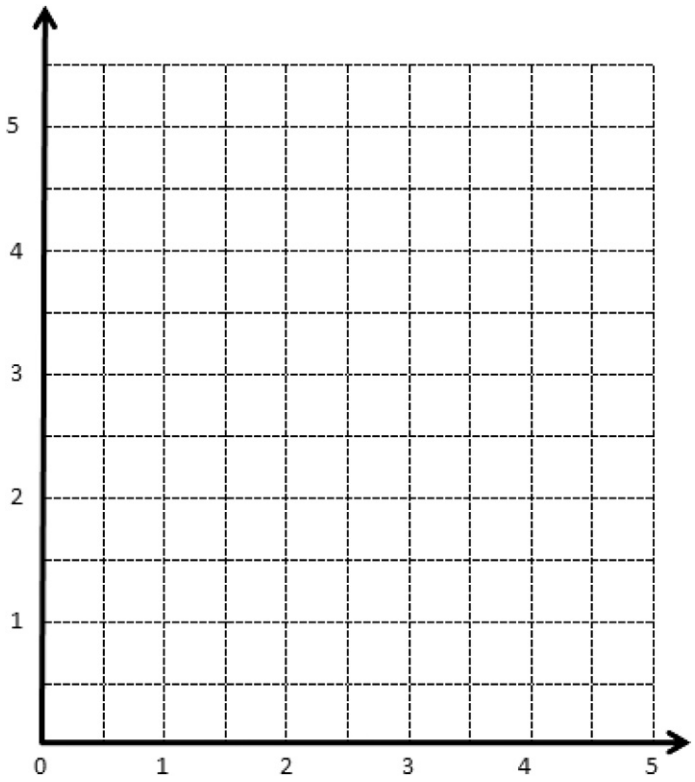
1.

a.

| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $A$ | 0 | 0 | (0, 0) |
| $B$ | 1 | 1 | (1, 1) |
| $C$ | 2 | 2 | (2, 2) |
| $D$ | 3 | 3 | (3, 3) |

b.

| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $G$ | 0 | 3 | (0, 3) |
| $H$ | $\frac{1}{2}$ | $3\frac{1}{2}$ | $(\frac{1}{2}, 3\frac{1}{2})$ |
| $I$ | 1 | 4 | (1, 4) |
| $J$ | $1\frac{1}{2}$ | $4\frac{1}{2}$ | $(1\frac{1}{2}, 4\frac{1}{2})$ |




_____

coordinate plane

2.

a

| Point | $(x, y)$ |
|---|---|
| $L$ | (0, 3) |
| $M$ | (2, 3) |
| $N$ | (4, 3) |

b.

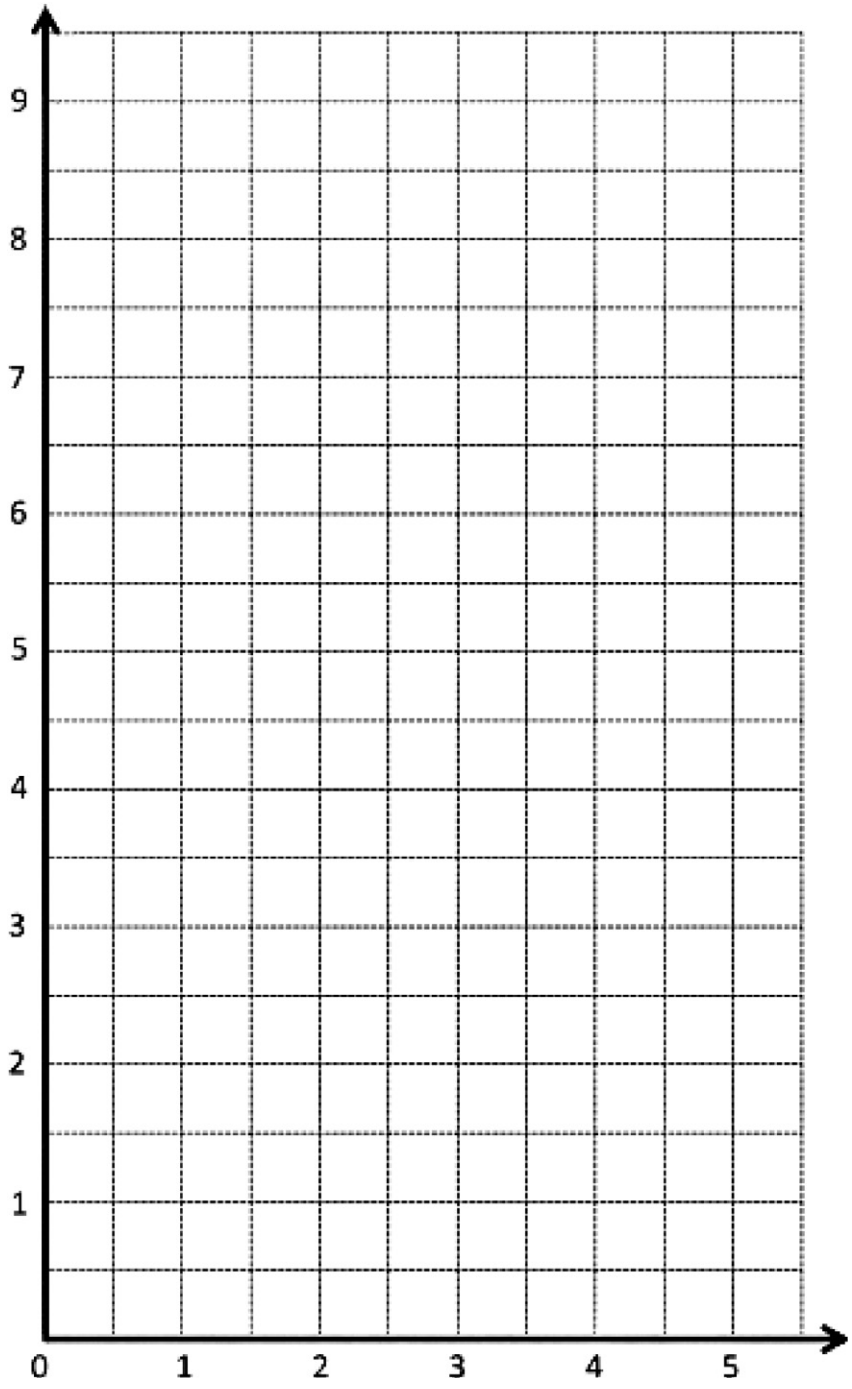
| Point | $(x, y)$ |
|---|---|
| $O$ | (0, 0) |
| $P$ | (1, 2) |
| $Q$ | (2, 4) |

c.

| Point | $(x, y)$ |
|---|---|
| $R$ | $(1, \frac{1}{2})$ |
| $S$ | $(2, 1\frac{1}{2})$ |
| $T$ | $(3, 2\frac{1}{2})$ |

d.

| Point | $(x, y)$ |
|---|---|
| $U$ | (1, 3) |
| $V$ | (2, 6) |
| $W$ | (3, 9) |




coordinate plane

The coordinate pairs listed locate points on two different lines. Write a rule that describes the relationship between the $x$- and $y$-coordinates for each line.

Line $\ell$: $(3\frac{1}{2}, 7)$, $(1\frac{2}{3}, 3\frac{1}{3})$, (5,10)

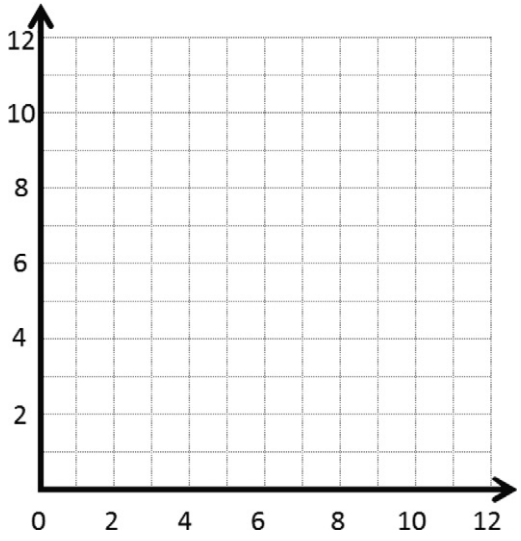
Line $m$: $(\frac{6}{3}, 1)$, $(3\frac{1}{2}, 1\frac{3}{4})$, $(13, 6\frac{1}{2})$

**Read** **Draw** **Write**

Name _____ Date _____

1. Create a table of 3 values for $x$ and $y$ such that each $y$-coordinate is 3 more than the corresponding $x$-coordinate.

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| | | |
| | | |
| | | |



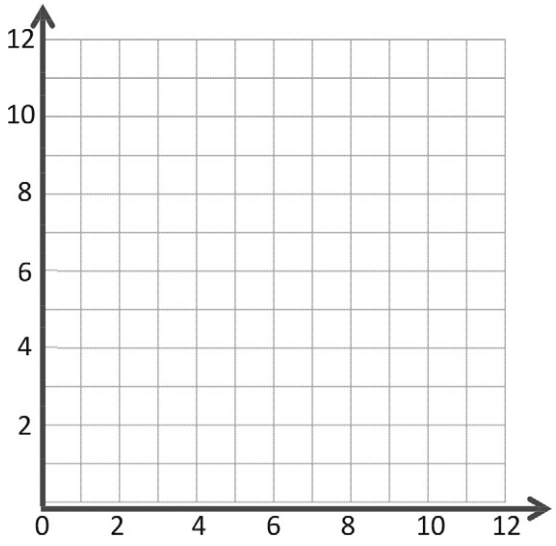

a. Plot each point on the coordinate plane.

b. Use a straightedge to draw a line connecting these points.

c. Give the coordinates of 2 other points that fall on this line with *x*-coordinates greater than 12.
(_____, _____) and (_____, _____)

2. Create a table of 3 values for $x$ and $y$ such that each $y$-coordinate is 3 times as much as its corresponding $x$-coordinate.

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| | | |
| | | |
| | | |



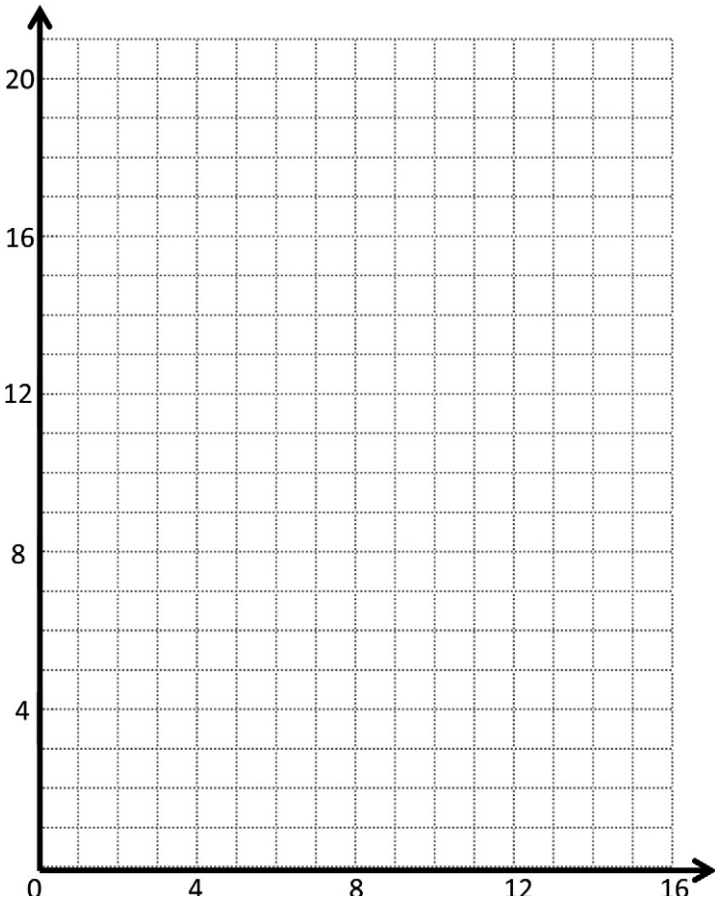

a. Plot each point on the coordinate plane.

b. Use a straightedge to draw a line connecting these points.

c. Give the coordinates of 2 other points that fall on this line with *y*-coordinates greater than 25.
(_____, _____) and (_____, _____)

3. Create a table of 5 values for $x$ and $y$ such that each $y$-coordinate is 1 more than 3 times as much as its corresponding $x$ value.

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |




a. Plot each point on the coordinate plane.

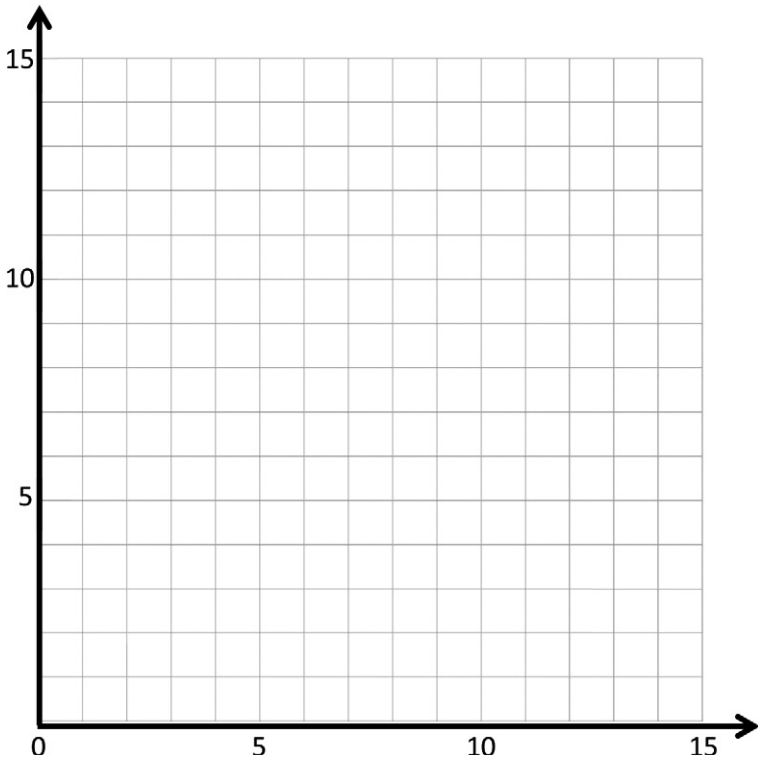
b. Use a straightedge to draw a line connecting these points.

c. Give the coordinates of 2 other points that would fall on this line whose $x$-coordinates are greater than 12.

(_____, _____) and (_____, _____)

4. Use the coordinate plane below to complete the following tasks.

a. Graph the lines on the plane.




line $\ell$: $x$ is equal to $y$

| | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $A$ | | | |
| $B$ | | | |
| $C$ | | | |

line $m$: $y$ is 1 more than $x$

| | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $G$ | | | |
| $H$ | | | |
| $I$ | | | |

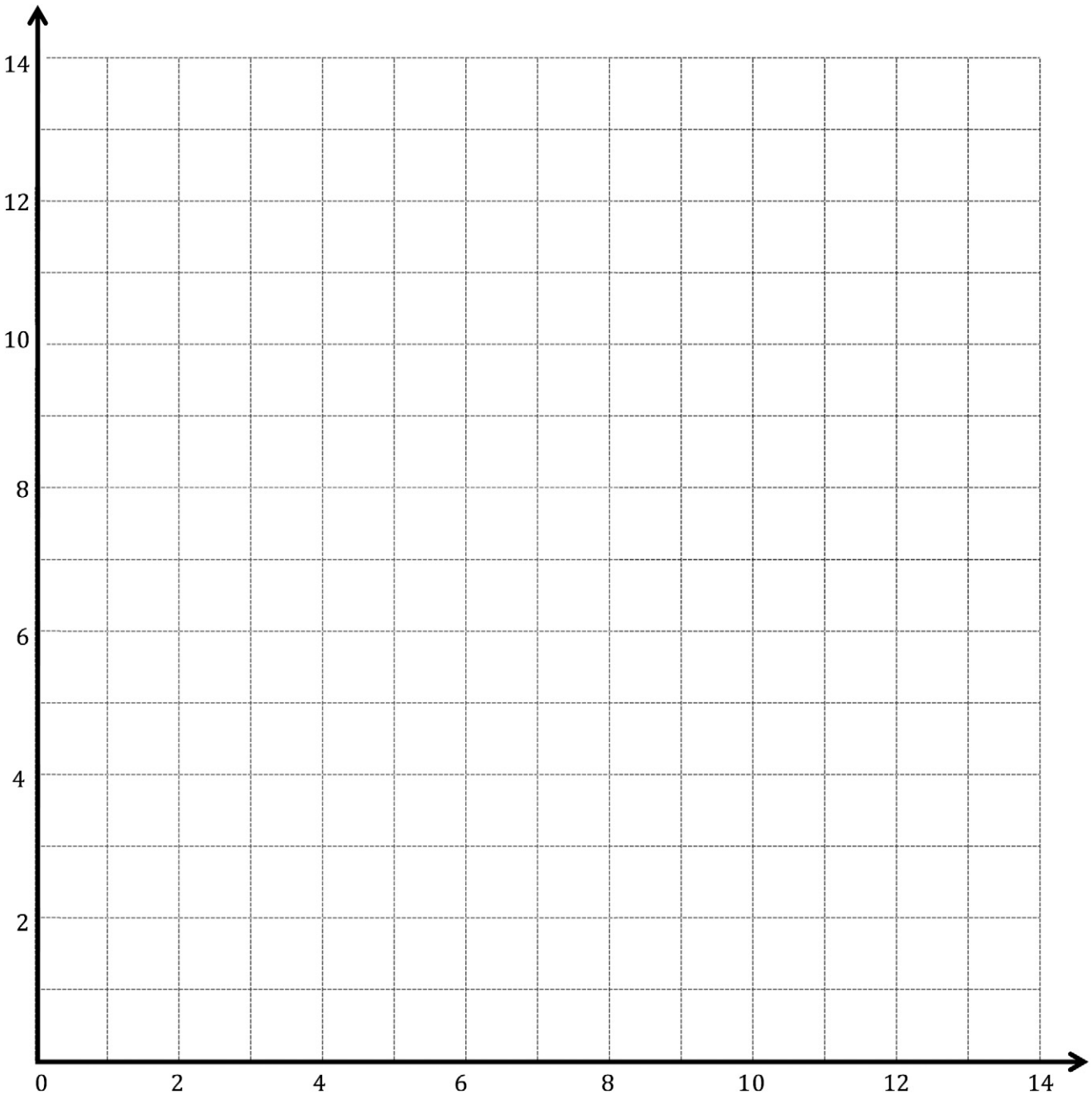
line $n$: $y$ is 1 more than twice $x$

| | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $S$ | | | |
| $T$ | | | |
| $U$ | | | |

b. Which two lines intersect? Give the coordinates of their intersection.

c. Which two lines are parallel?

d. Give the rule for another line that would be parallel to the lines you listed in Problem 4(c).




| Line $a$: | | |
|---|---|---|
| $x$ | $y$ | $(x, y)$ |
| | | |
| | | |
| | | |

| Line $b$: | | |
|---|---|---|
| $x$ | $y$ | $(x, y)$ |
| | | |
| | | |
| | | |

| Line $c$: | | |
|---|---|---|
| $x$ | $y$ | $(x, y)$ |
| | | |
| | | |
| | | |

coordinate plane

Maggie spent $46.20 to buy pencil sharpeners for her gift shop. If each pencil sharpener costs 60 cents, how many pencil sharpeners did she buy? Solve by using the standard algorithm.

**Read** **Draw** **Write**

Name _____ Date _____

1. Complete the table for the given rules.

Line $a$

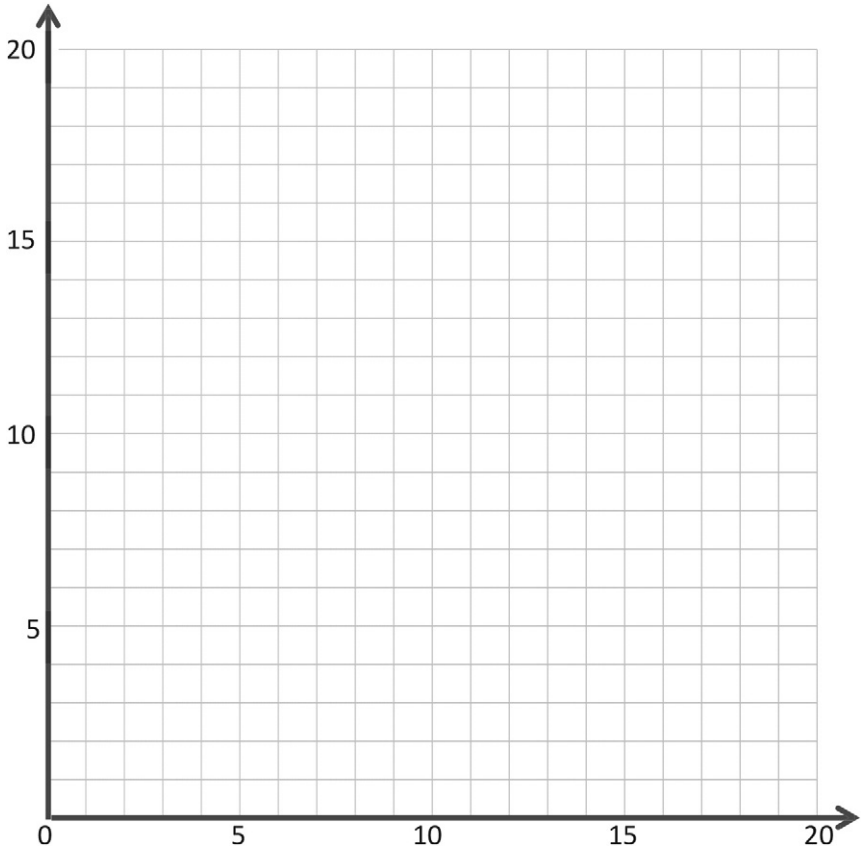
*Rule: $y$ is 1 more than $x$*

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 1 | | |
| 5 | | |
| 9 | | |
| 13 | | |

Line $b$

*Rule: $y$ is 4 more than $x$*

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 0 | | |
| 5 | | |
| 8 | | |
| 11 | | |




a. Construct each line on the coordinate plane above.

b. Compare and contrast these lines.

c. Based on the patterns you see, predict what line $c$, whose rule is *$y$ is 7 more than $x$*, would look like. Draw your prediction on the plane above.

2. Complete the table for the given rules.

Line $e$

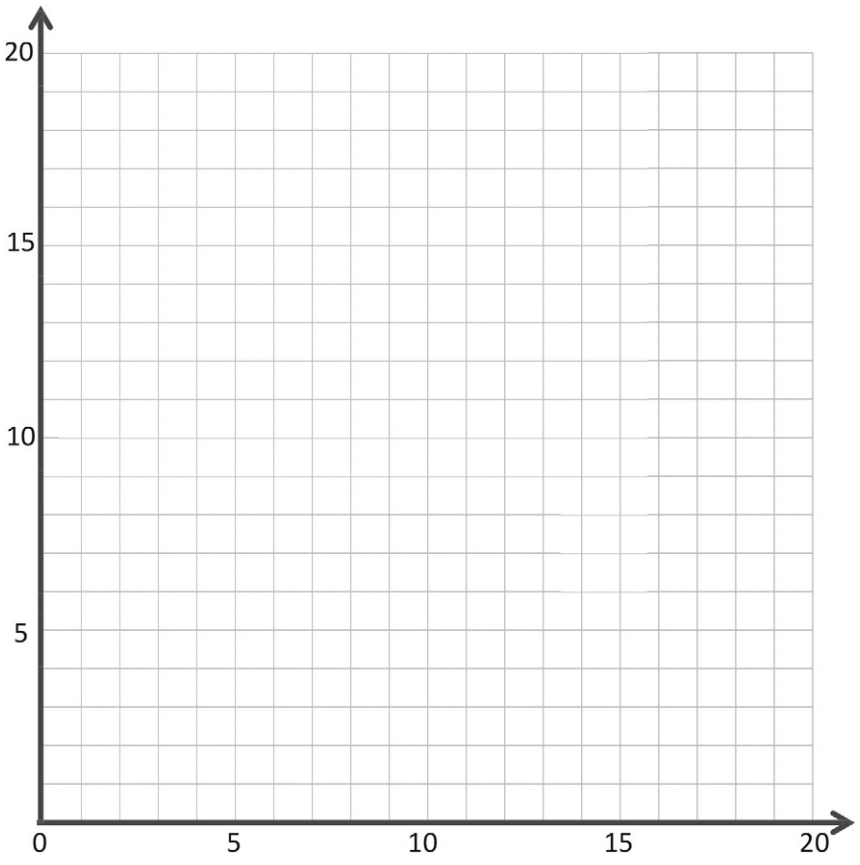
*Rule: $y$ is twice as much as $x$*

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 0 | | |
| 2 | | |
| 5 | | |
| 9 | | |

Line $f$

*Rule: $y$ is half as much as $x$*

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 0 | | |
| 6 | | |
| 10 | | |
| 20 | | |




a. Construct each line on the coordinate plane above.

b. Compare and contrast these lines.

c. Based on the patterns you see, predict what line $g$, whose rule is *$y$ is 4 times as much as $x$*, would look like. Draw your prediction in the plane above.

Line $\ell$

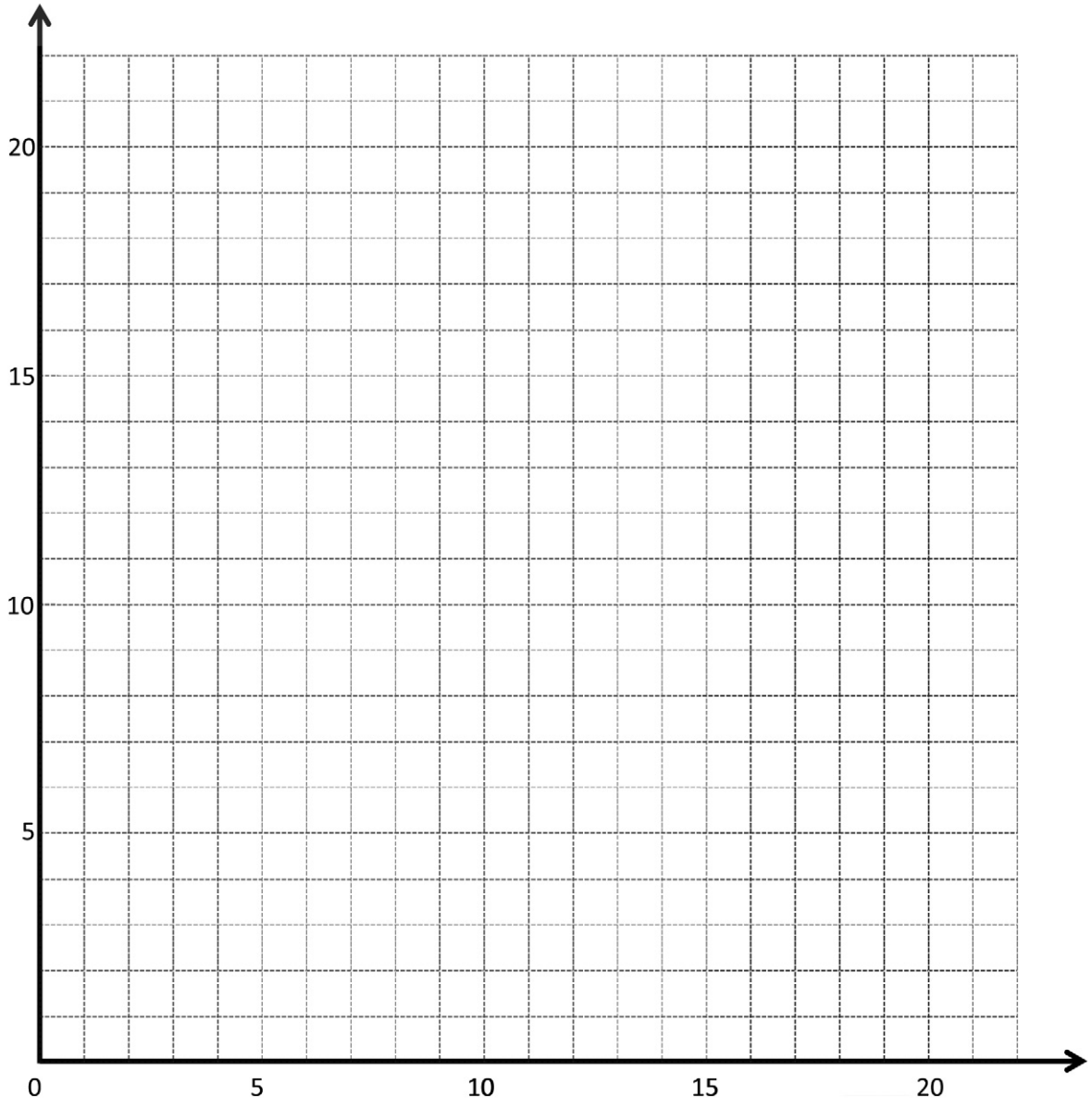
*Rule: $y$ is 2 more than $x$*

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 1 | | |
| 5 | | |
| 10 | | |
| 15 | | |

Line $m$

*Rule: $y$ is 5 more than $x$*

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 0 | | |
| 5 | | |
| 10 | | |
| 15 | | |




coordinate plane

Line $p$

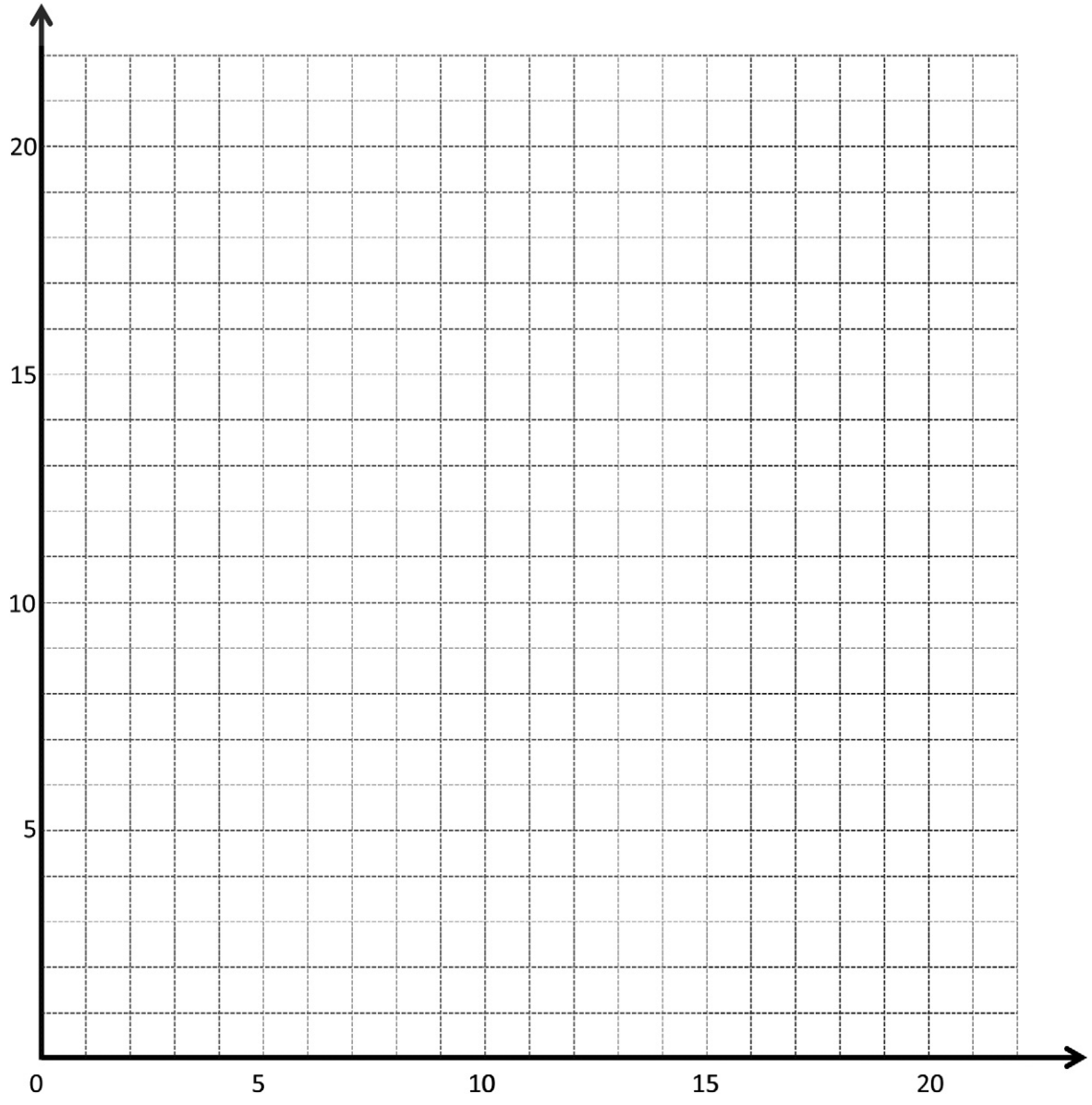
*Rule: y is x times 2*

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

Line $q$

*Rule: y is x times 3*

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| | | |
| | | |
| | | |
| | | |




coordinate plane

A 12-man relay team runs a 45 km race. Each member of the team runs an equal distance. How many kilometers does each team member run? One lap around the track is 0.75 km. How many laps does each team member run during the race?

**Read** **Draw** **Write**

Name _____ Date _____

1. Use the coordinate plane below to complete the following tasks.

   a. Line $p$ represents the rule *$x$ and $y$ are equal*.

   b. Construct a line, $d$, that is parallel to line $p$ and contains point $D$.

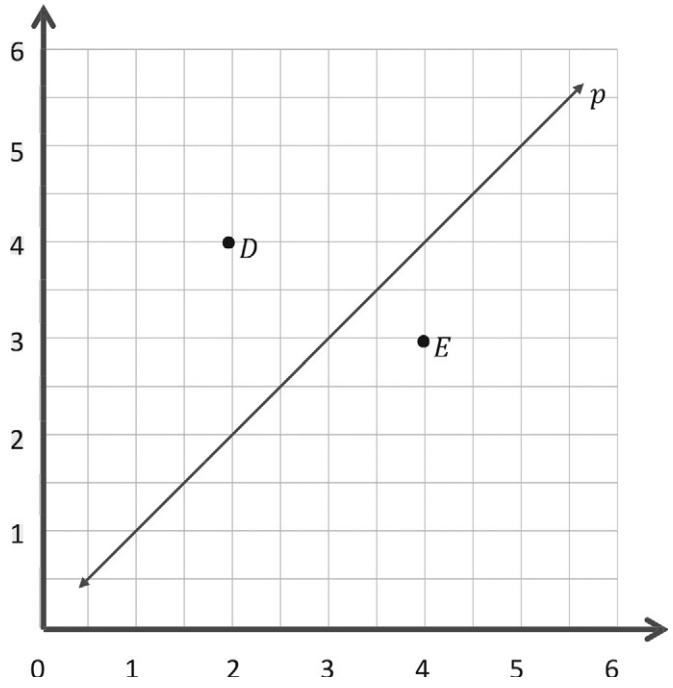
   c. Name 3 coordinate pairs on line $d$.

   d. Identify a rule to describe line $d$.

   e. Construct a line, $e$, that is parallel to line $p$ and contains point $E$.

   f. Name 3 points on line $e$.

   g. Identify a rule to describe line $e$.




   h. Compare and contrast lines $d$ and $e$ in terms of their relationship to line $p$.

2. Write a rule for a fourth line that would be parallel to those above and would contain the point ($3\frac{1}{2}$, 6). Explain how you know.

3. Use the coordinate plane below to complete the following tasks.

   a. Line $p$ represents the rule *$x$ and $y$ are equal*.

   b. Construct a line, $v$, that contains the origin and point $V$.

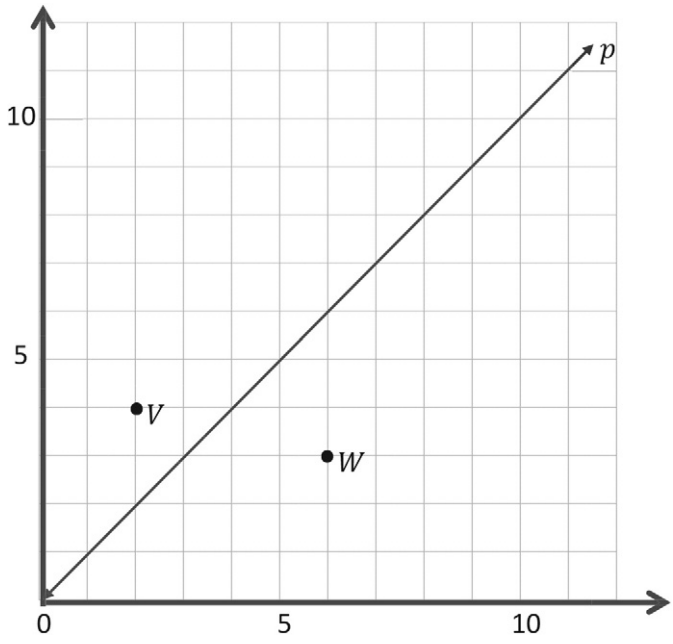
   c. Name 3 points on line $v$.

   d. Identify a rule to describe line $v$.

   e. Construct a line, $w$, that contains the origin and point $W$.

   f. Name 3 points on line $w$.

   g. Identify a rule to describe line $w$.




   h. Compare and contrast lines $v$ and $w$ in terms of their relationship to line $p$.

   i. What patterns do you see in lines that are generated by multiplication rules?

4. Circle the rules that generate lines that are parallel to each other.

   *add 5 to $x$* *multiply $x$ by $\frac{2}{3}$* *$x$ plus $\frac{1}{2}$* *$x$ times $1\frac{1}{2}$*

Line $p$

*Rule: y is 0 more than x*

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 0 | | |
| 5 | | |
| 10 | | |
| 15 | | |

Line $b$

*Rule:* _____

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 7 | | |
| 10 | | |
| 13 | | |
| 18 | | |

Line $c$

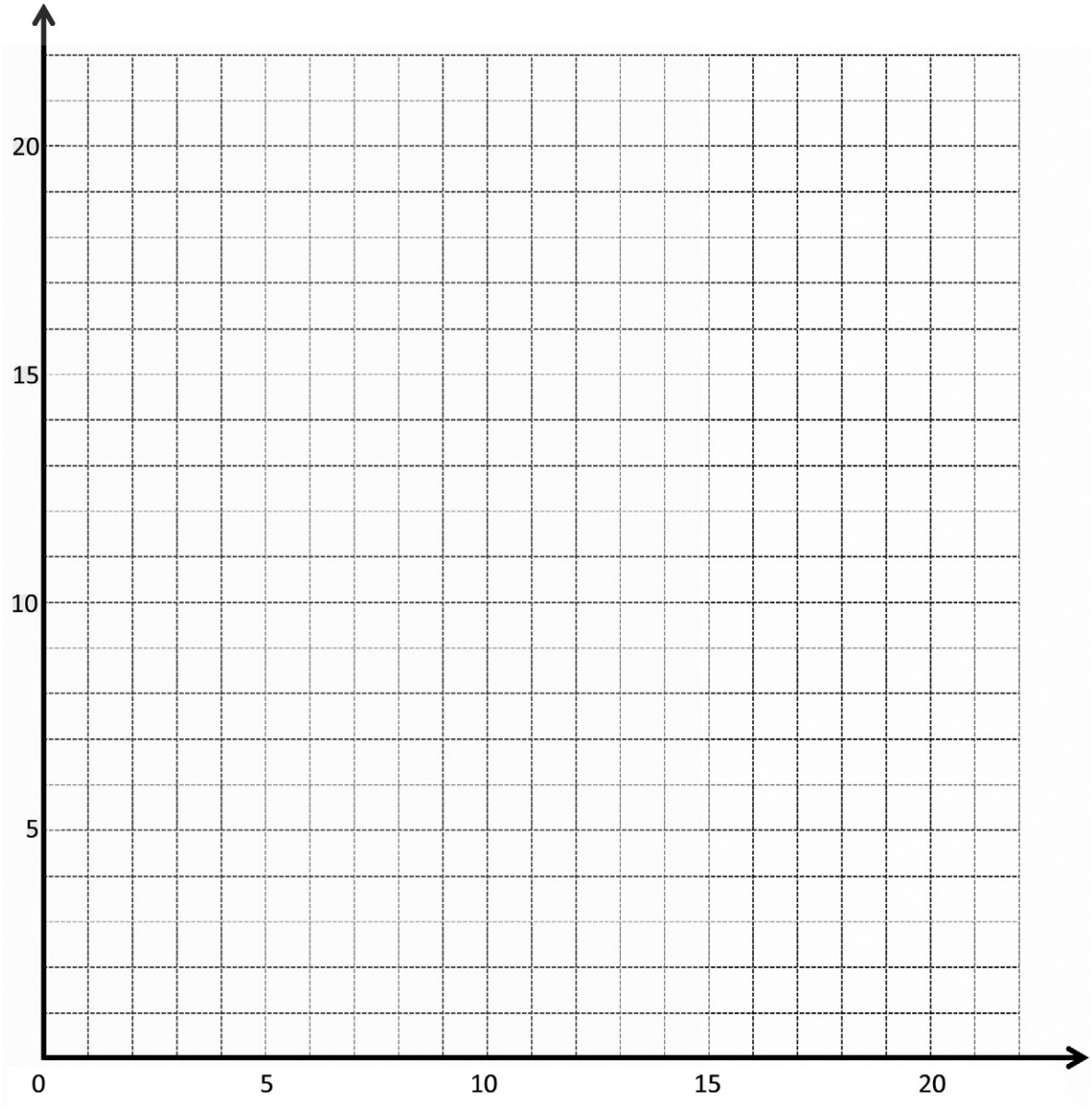
*Rule:* _____

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 2 | | |
| 4 | | |
| 8 | | |
| 11 | | |

Line $d$

*Rule:* _____

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 5 | | |
| 7 | | |
| 12 | | |
| 15 | | |




_____

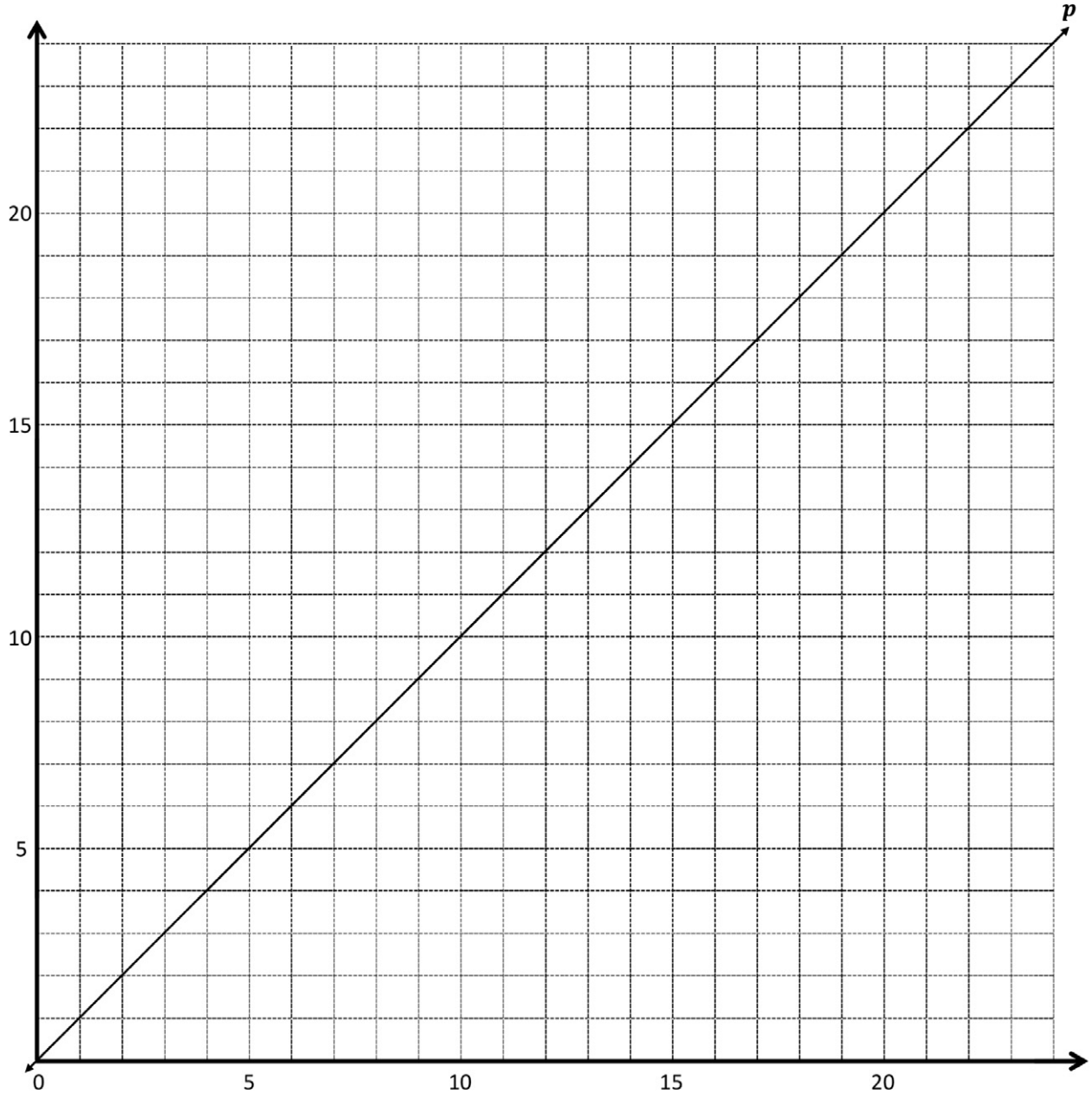
coordinate plane

*Line $g$ Rule:* _____

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 1 | | |
| 2 | | |
| 5 | | |
| 7 | | |

*Line $h$ Rule:* _____

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 3 | | |
| 6 | | |
| 12 | | |
| 15 | | |




coordinate plane

Michelle has 3 kg of strawberries that she divided equally into small bags with 15 kg in each bag.

a. How many bags of strawberries did she make?

b. She gave a bag to her friend, Sarah. Sarah ate half of her strawberries. How many grams of strawbernes does Sarah have left?

**Read** **Draw** **Write**

Name _____ Date _____

1. Complete the tables for the given rules.

Line $\ell$

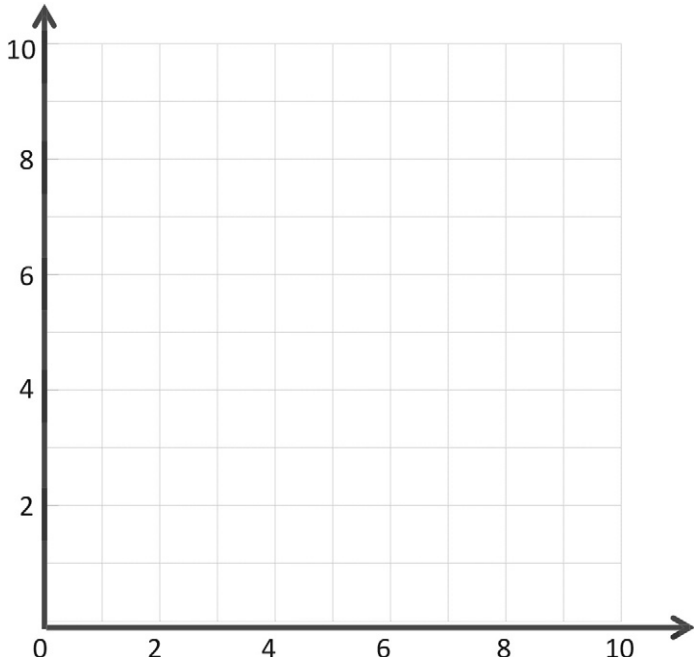
Rule: *Double x*

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 0 | | |
| 1 | | |
| 2 | | |
| 3 | | |

Line $m$

Rule: *Double x, and then add 1*

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 0 | | |
| 1 | | |
| 2 | | |
| 3 | | |




a. Draw each line on the coordinate plane above.

b. Compare and contrast these lines.

c. Based on the patterns you see, predict what the line for the rule *double x, and then subtract 1* would look like. Draw the line on the plane above.

2. Circle the point(s) that the line for the rule *multiply x by* $\frac{1}{3}$, *and then add 1* would contain.

$(0, \frac{1}{3})$ $(2, 1\frac{2}{3})$ $(1\frac{1}{2}, 1\frac{1}{2})$ $(2\frac{1}{4}, 2\frac{1}{4})$

a. Explain how you know.

b. Give two other points that fall on this line.

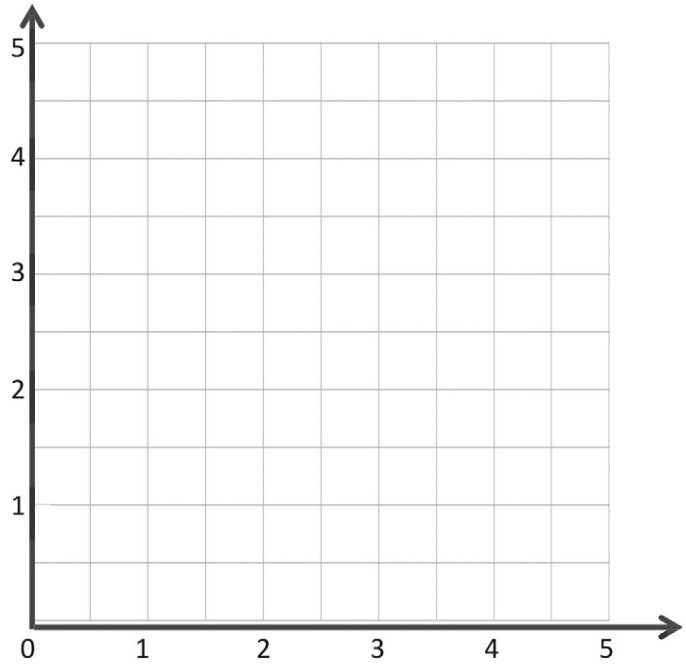
3. Complete the tables for the given rules.

Line $\ell$
Rule: *Halve x*

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 0 | | |
| 1 | | |
| 2 | | |
| 3 | | |

Line $m$
Rule: *Halve x, and then add 1* $\frac{1}{2}$

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 0 | | |
| 1 | | |
| 2 | | |
| 3 | | |




a. Draw each line on the coordinate plane above.

b. Compare and contrast these lines.

c. Based on the patterns you see, predict what the line for the rule *halve x, and then subtract 1* would look like. Draw the line on the plane above.

4. Circle the point(s) that the line for the rule *multiply x by* $\frac{2}{3}$, *and then subtract 1* would contain.

$(1\frac{1}{3}, \frac{1}{9})$ $(2, \frac{1}{3})$ $(1\frac{3}{2}, 1\frac{1}{2})$ (3, 1)

a. Explain how you know.

b. Give two other points that fall on this line.

Line $\ell$

Rule: *Triple $x$*

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 0 | | |
| 1 | | |
| 2 | | |
| 4 | | |

Line $m$

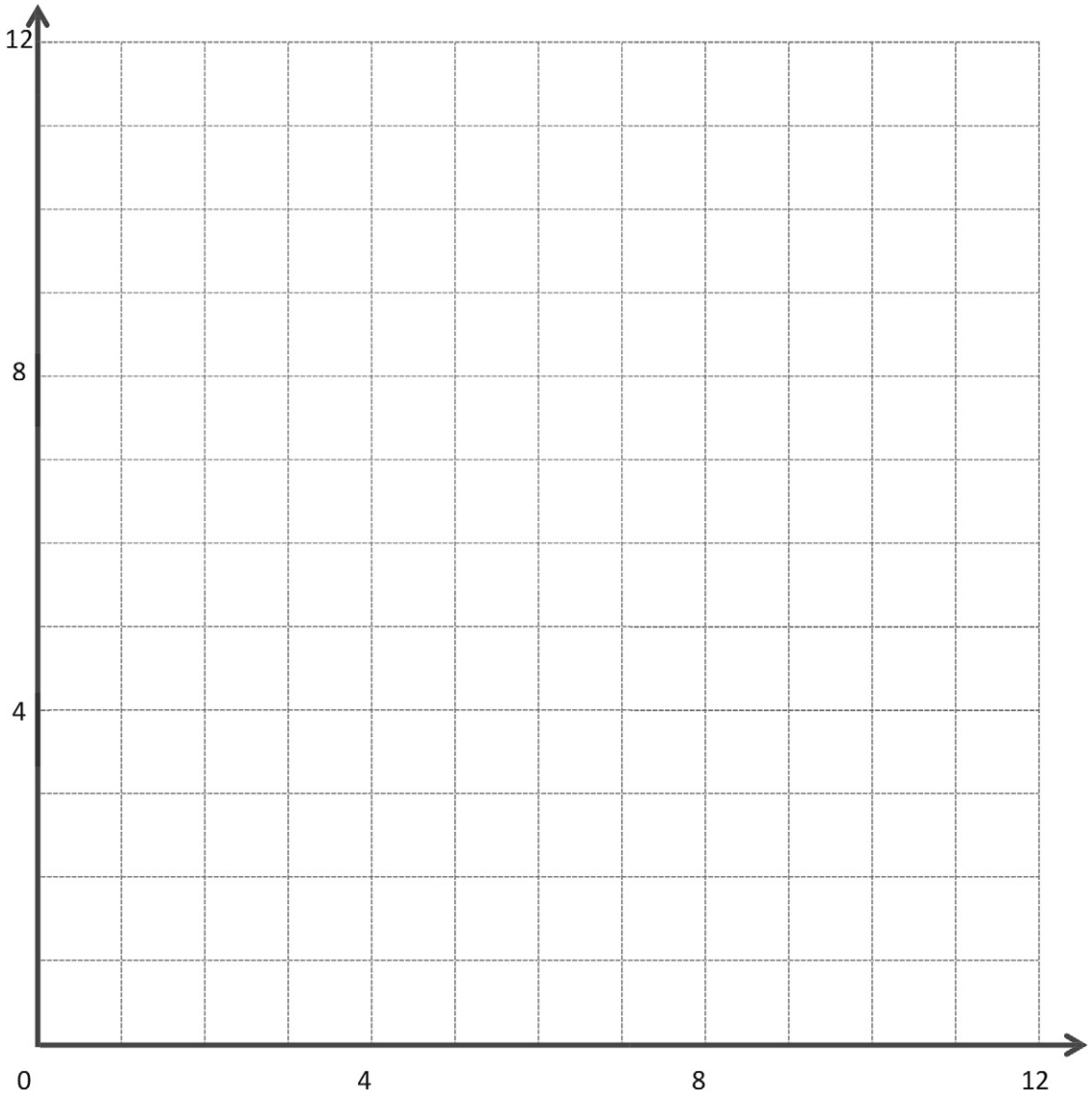
Rule: *Triple $x$, and then add 3*

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 0 | | |
| 1 | | |
| 2 | | |
| 3 | | |

Line $n$

Rule: *Triple $x$, and then subtract 2*

| $x$ | $y$ | $(x, y)$ |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |




coordinate plane

Mr. Jones had 640 books. He sold $\frac{1}{4}$ of them for $2.00 each in the month of September. He sold half of the remaining books in October. Each book he sold in October earned $\frac{3}{4}$ of what each book sold for in September. How much money did Mr. Jones earn selling books? Show your thinking with a tape diagram.

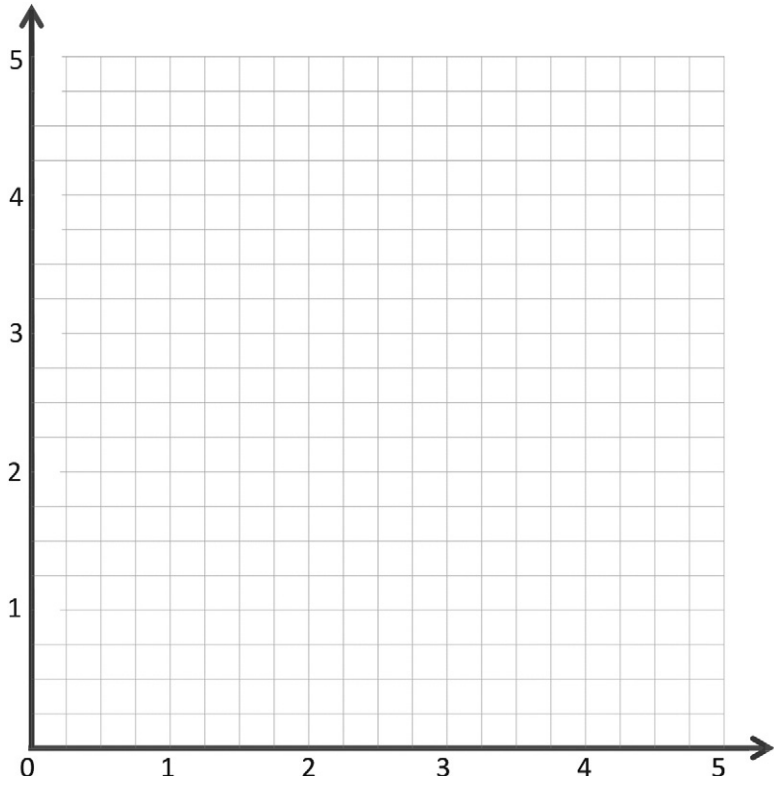
**Read** **Draw** **Write**

Name _____ Date _____

1. Write a rule for the line that contains the points (0, $\frac{3}{4}$) and ($2\frac{1}{2}$, $3\frac{1}{4}$).

   a. Identify 2 more points on this line. Draw the line on the grid below.

| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $B$ | | | |
| $C$ | | | |




   b. Write a rule for a line that is parallel to $\overleftrightarrow{BC}$ and goes through point (1, $\frac{1}{4}$).

2. Create a rule for the line that contains the points (1, $\frac{1}{4}$) and (3, $\frac{3}{4}$).

   a. Identify 2 more points on this line. Draw the line on the grid on the right.

| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $G$ | | | |
| $H$ | | | |

   b. Write a rule for a line that passes through the origin and lies between $\overleftrightarrow{BC}$ and $\overleftrightarrow{GH}$.

3. Create a rule for a line that contains the point $(\frac{1}{4}, 1\frac{1}{4})$ using the operation or description below. Then, name 2 other points that would fall on each line.

   a. Addition: _____

| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $T$ | | | |
| $U$ | | | |

   b. A line parallel to the *x*-axis: _____

| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $G$ | | | |
| $H$ | | | |

   c. Multiplication: _____

| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $A$ | | | |
| $B$ | | | |

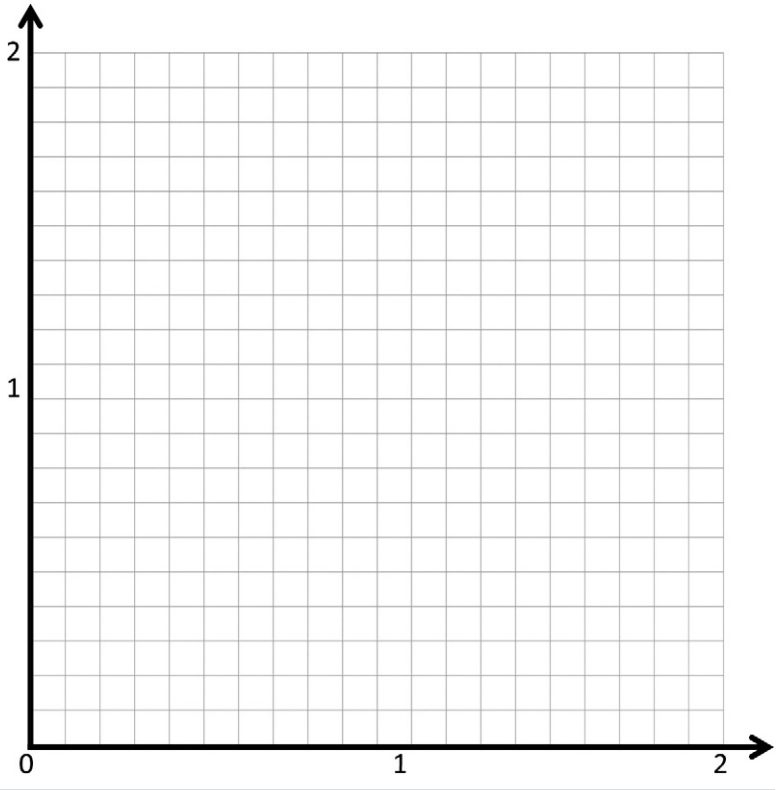
   d. A line parallel to the *y*-axis: _____

| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $V$ | | | |
| $W$ | | | |

   e. Multiplication with addition: _____

| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $R$ | | | |
| $S$ | | | |

4. Mrs. Boyd asked her students to give a rule that could describe a line that contains the point (0.6, 1.8). Avi said the rule could be *multiply x by 3*. Ezra claims this could be a vertical line, and the rule could be *x is always 0.6*. Erik thinks the rule could be *add 1.2 to x*. Mrs. Boyd says that all the lines they are describing could describe a line that contains the point she gave. Explain how that is possible, and draw the lines on the coordinate plane to support your response.



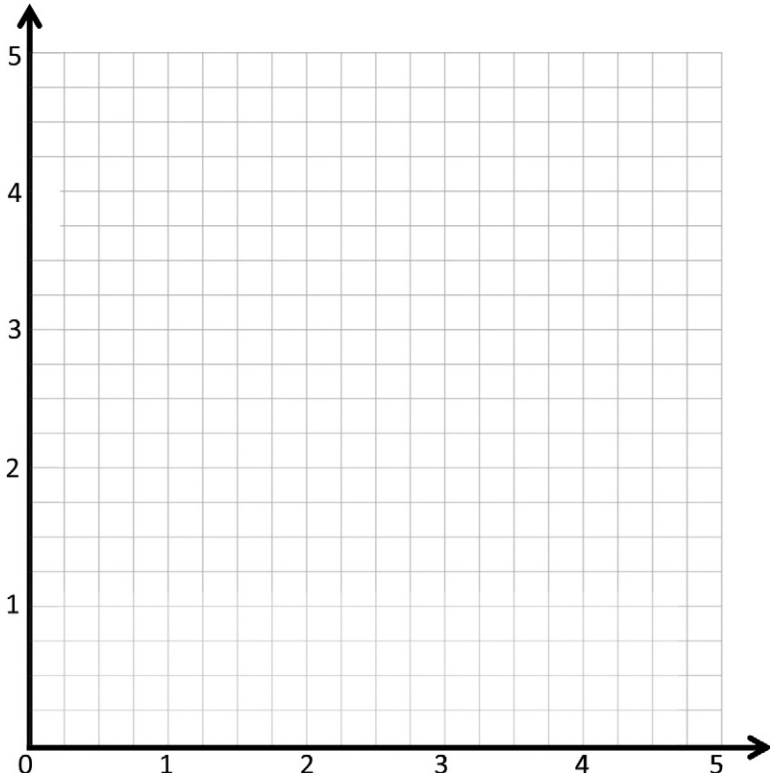
Extension:

5. Create a mixed operation rule for the line that contains the points (0, 1) and (1, 3).

a. Identify 2 more points, $O$ and $P$, on this line. Draw the line on the grid.

| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| *O* | | | |
| *P* | | | |

b. Write a rule for a line that is parallel to $\overleftrightarrow{OP}$ and goes through point (1, $2\frac{1}{2}$).



Line $l$

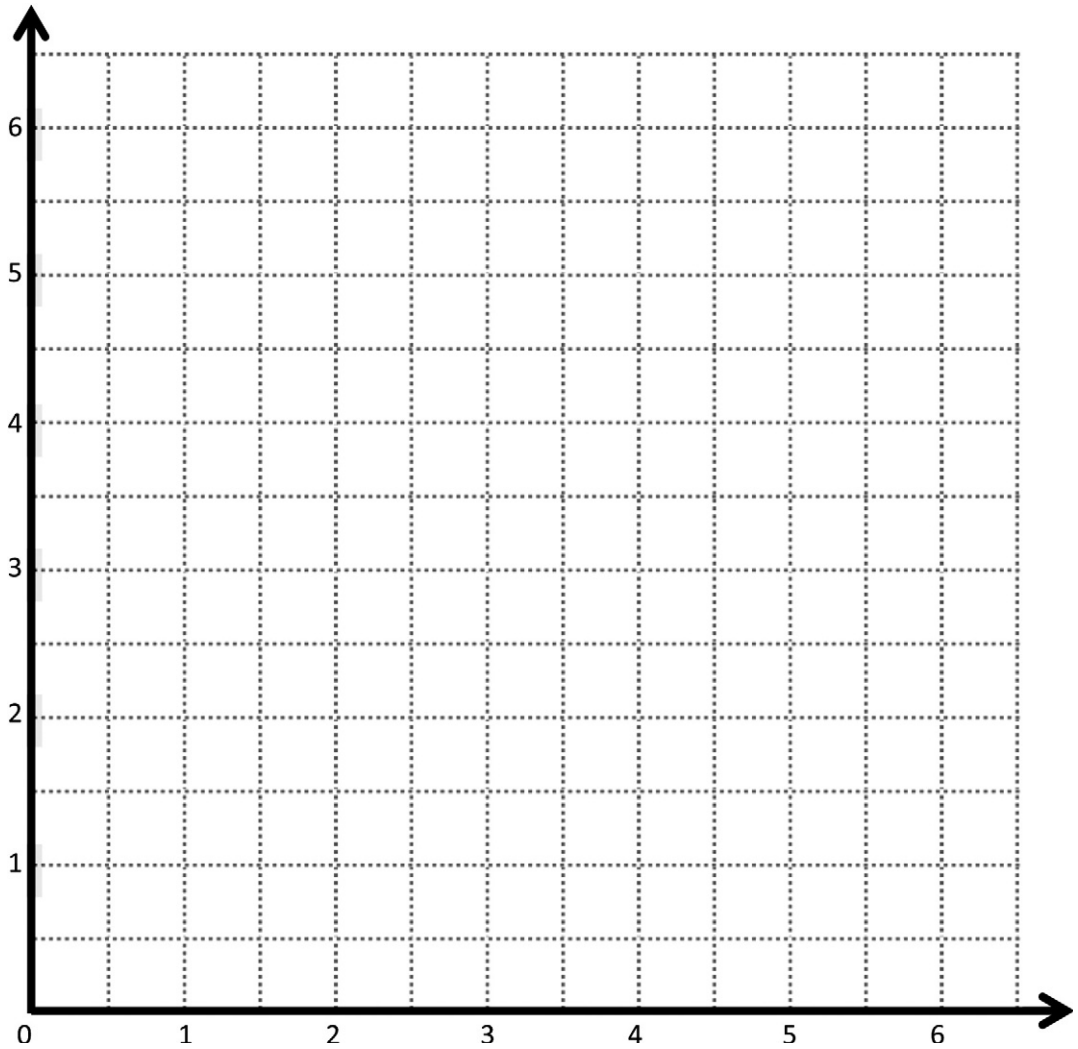
Rule: _____

| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $A$ | $1\frac{1}{2}$ | 3 | $(1\frac{1}{2}, 3)$ |
| $B$ | | | |
| $C$ | | | |
| $D$ | | | |

Line $m$

Rule: _____

| Point | $x$ | $y$ | $(x, y)$ |
|---|---|---|---|
| $A$ | | | |
| $E$ | | | |
| $F$ | | | |
| $G$ | | | |



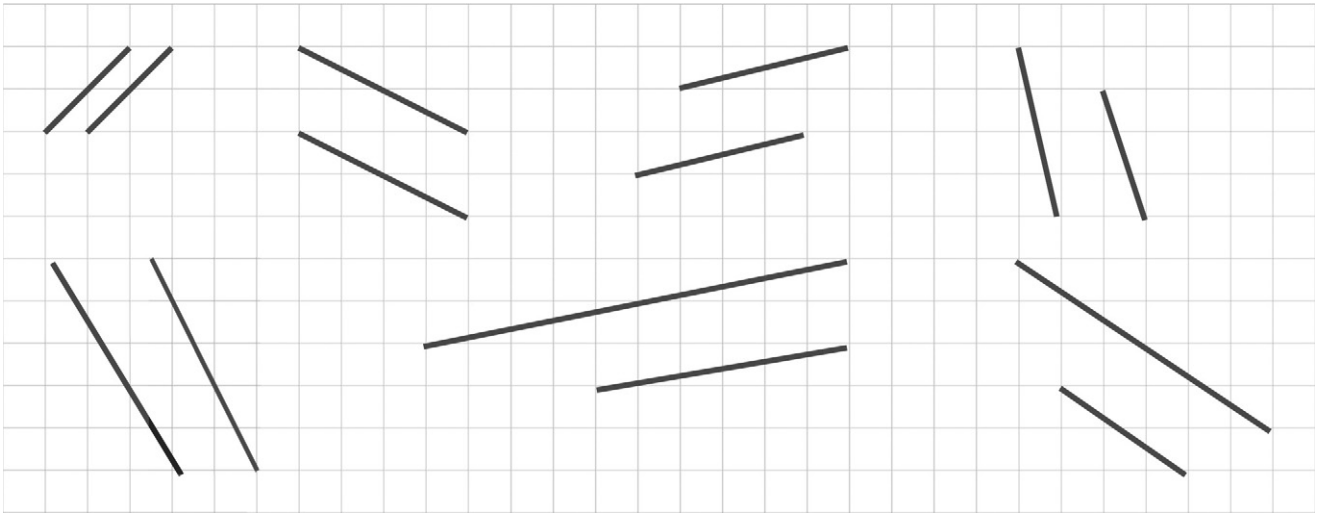

_____

coordinate plane

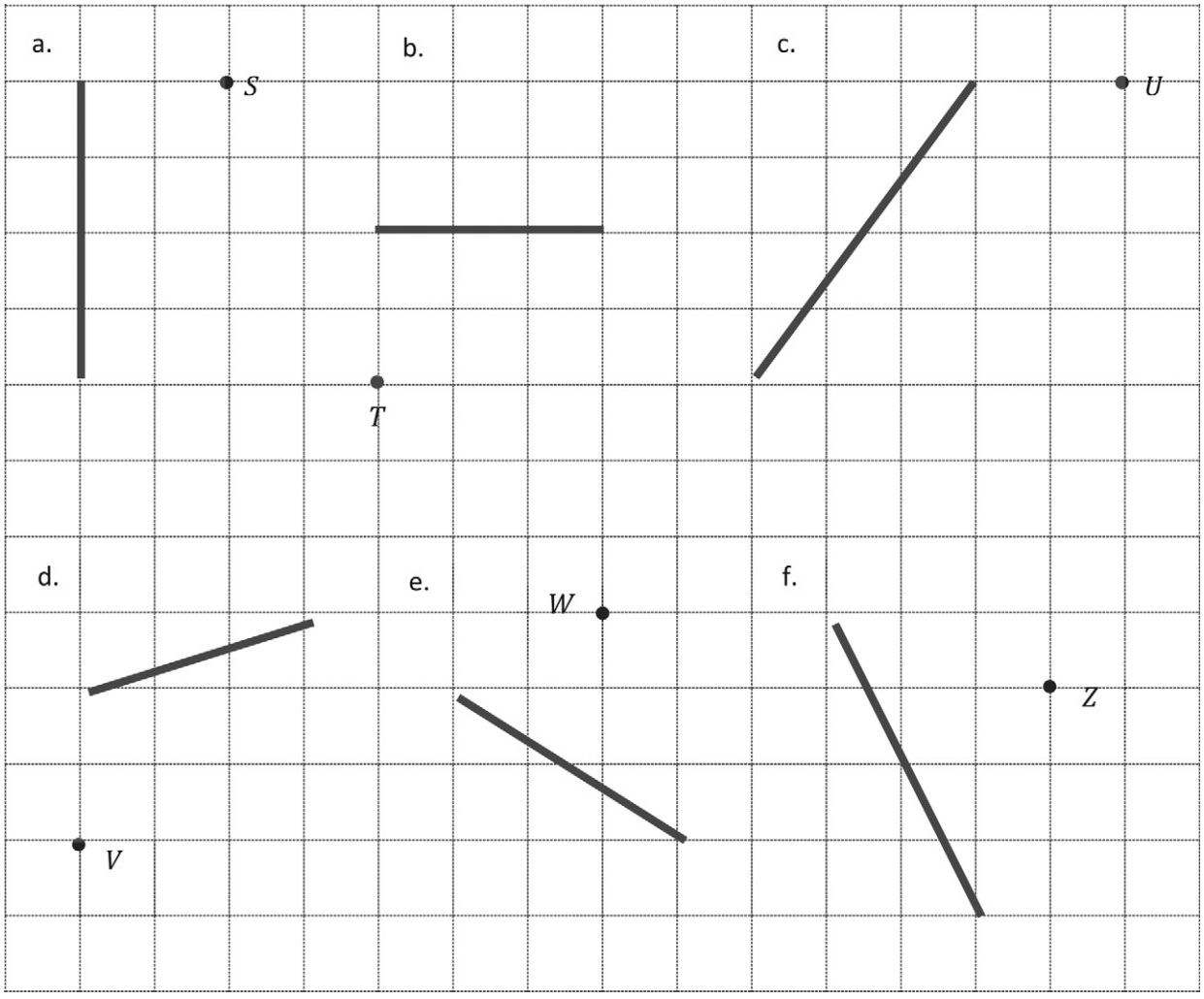
Name _____ Date _____

1. Use a right angle template and straightedge to draw at least four sets of parallel lines in the space below.

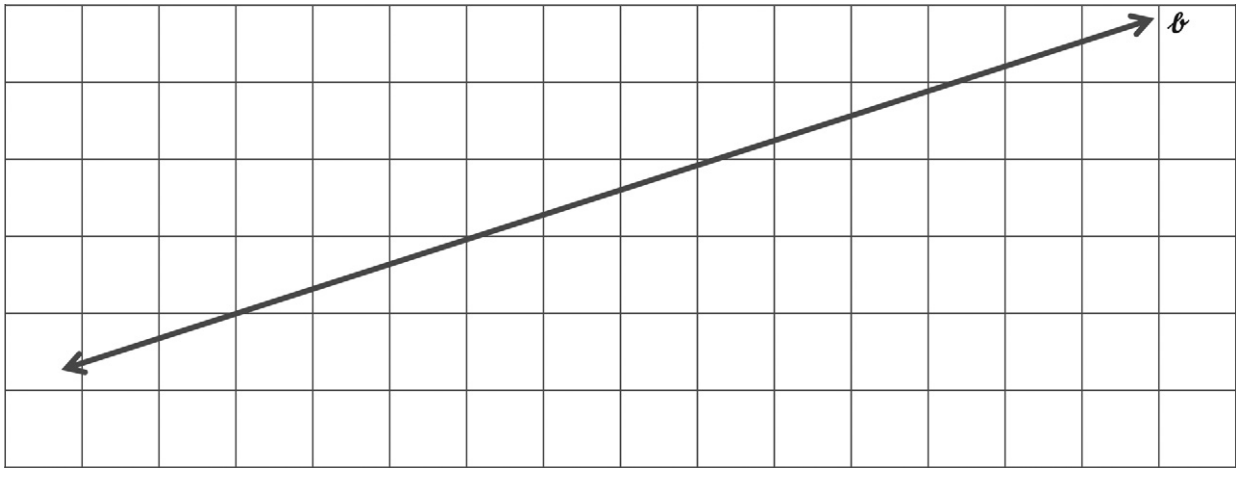
2. Circle the segments that are parallel.

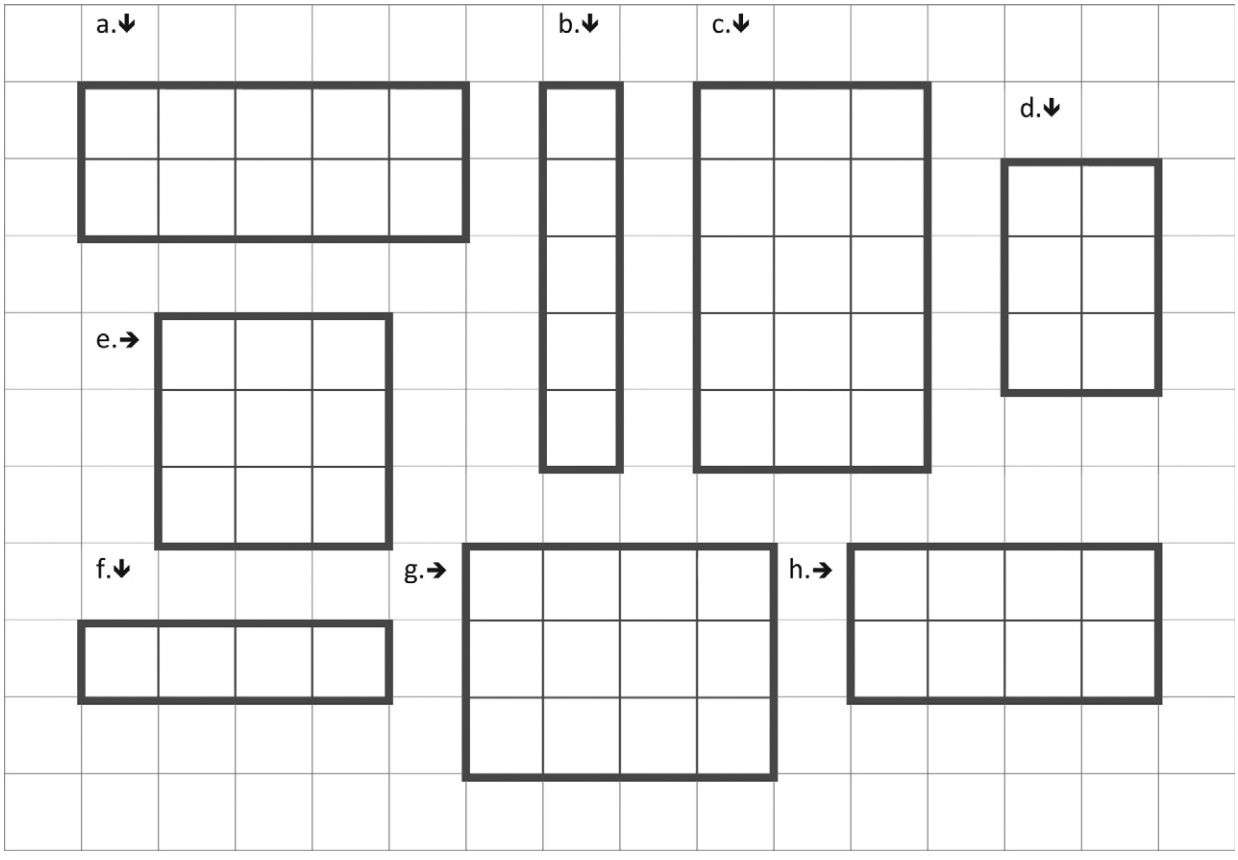


3. Use your straightedge to draw a segment parallel to each segment through the given point.

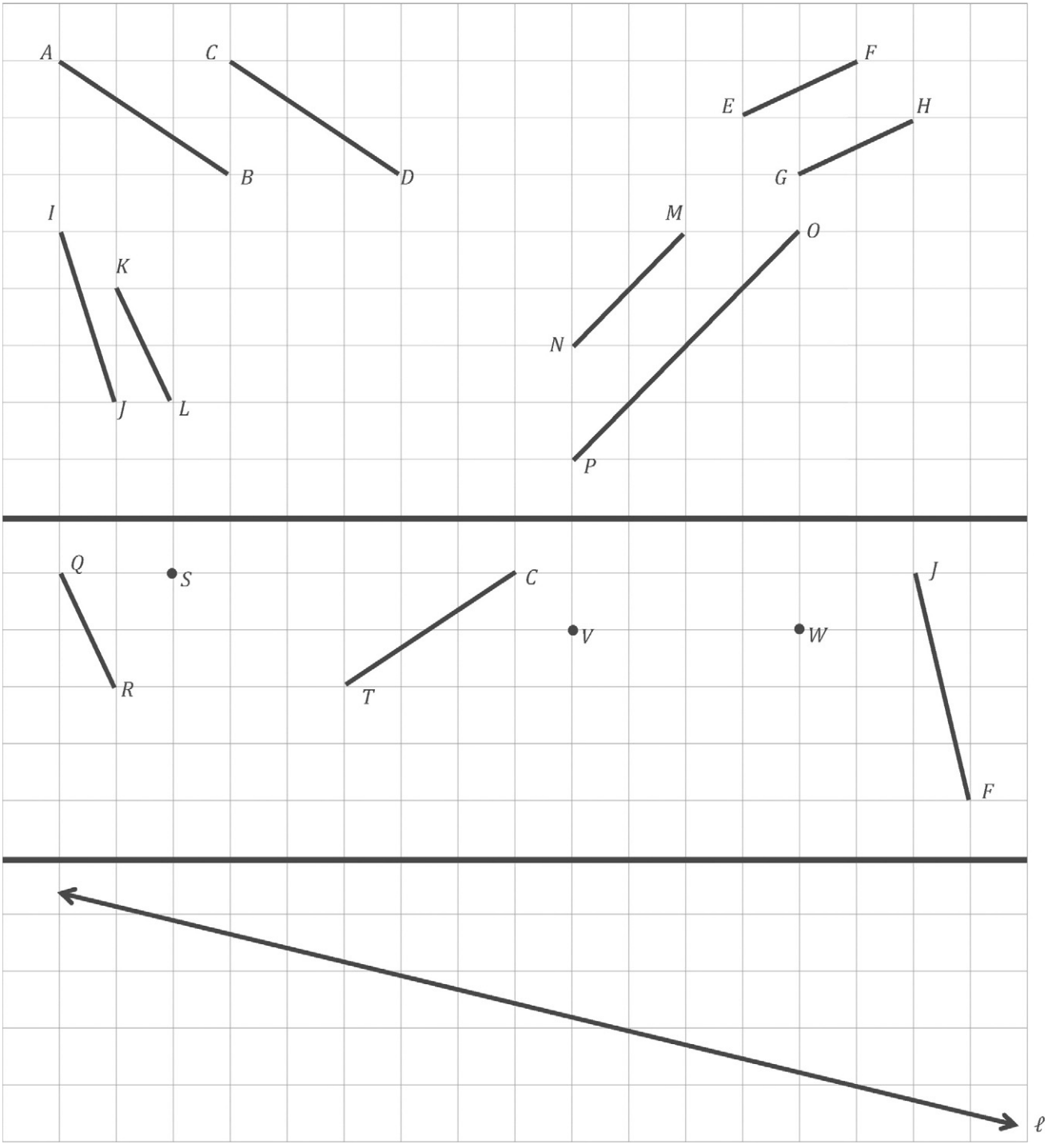



4. Draw 2 different lines parallel to line $\mathscr{b}$.






rectangles



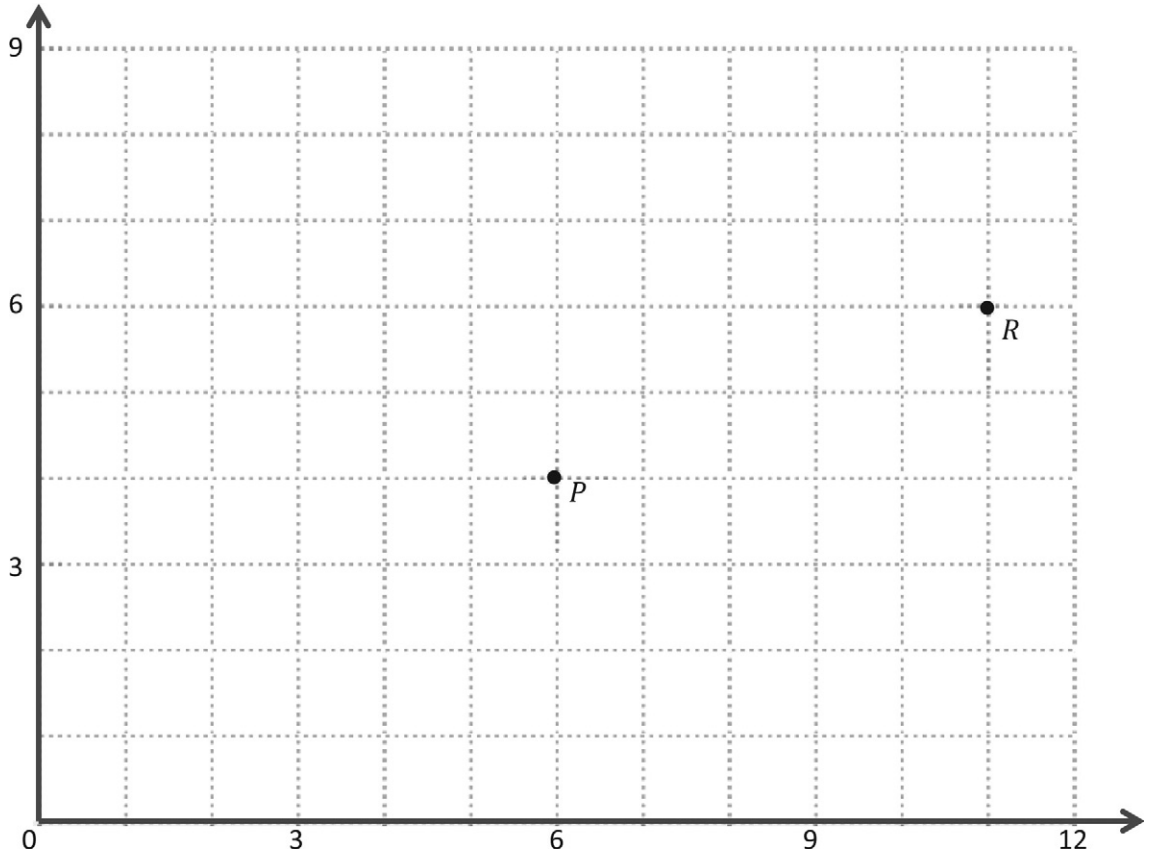

recording sheet

Drew's fish tank measures 32 cm by 22 cm by 26 cm. He pours 20 liters of water into it, and some water overflows the tank. Find the volume of water, in milliliters, that overflows.

**Read** **Draw** **Write**

Name _____ Date _____

1. Use the coordinate plane below to complete the following tasks.




a. Identify the locations of $P$ and $R$. $P$: (_____, _____) $R$: (_____, _____)

b. Draw $\overleftrightarrow{PR}$.

c. Plot the following coordinate pairs on the plane.

$S$: (6, 7) $T$: (11, 9)

d. Draw $\overleftrightarrow{ST}$.

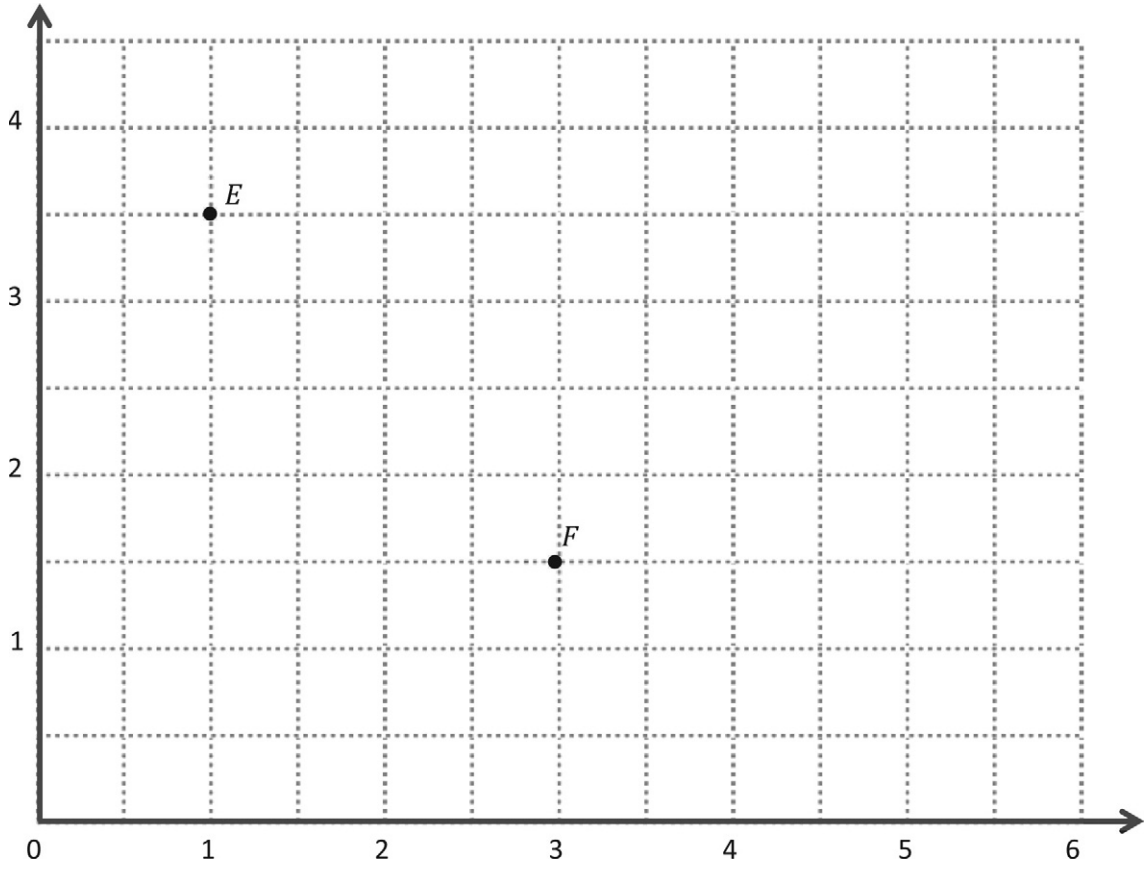
e. Circle the relationship between $\overleftrightarrow{PR}$ and $\overleftrightarrow{ST}$. $\overleftrightarrow{PR} \perp \overleftrightarrow{ST}$ $\overleftrightarrow{PR} \parallel \overleftrightarrow{ST}$

f. Give the coordinates of a pair of points, $U$ and $V$, such that $\overleftrightarrow{UV} \parallel \overleftrightarrow{PR}$.

$U$: (_____, _____) $V$: (_____, _____)

g. Draw $\overleftrightarrow{UV}$.

2. Use the coordinate plane below to complete the following tasks.




a. Identify the locations of $E$ and $F$. $E$: (_____, _____) $F$: (_____, _____)

b. Draw $\overleftrightarrow{EF}$.

c. Generate coordinate pairs for $L$ and $M$, such that $\overleftrightarrow{EF} \| \overleftrightarrow{LM}$.

$L$: (____, ____) $M$: (____, ____)

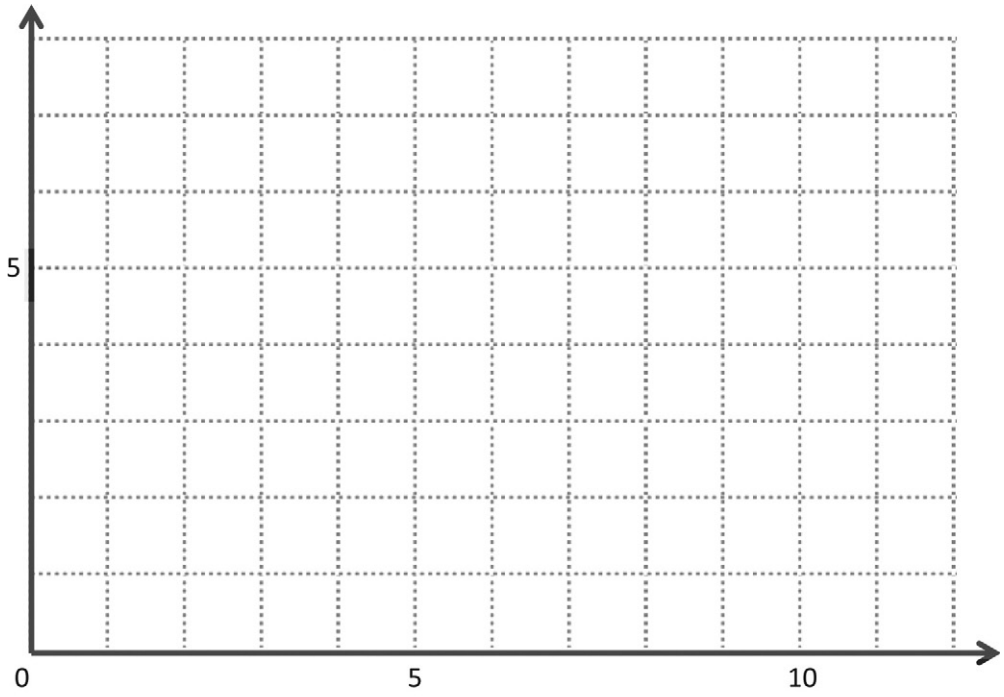
d. Draw $\overleftrightarrow{LM}$.

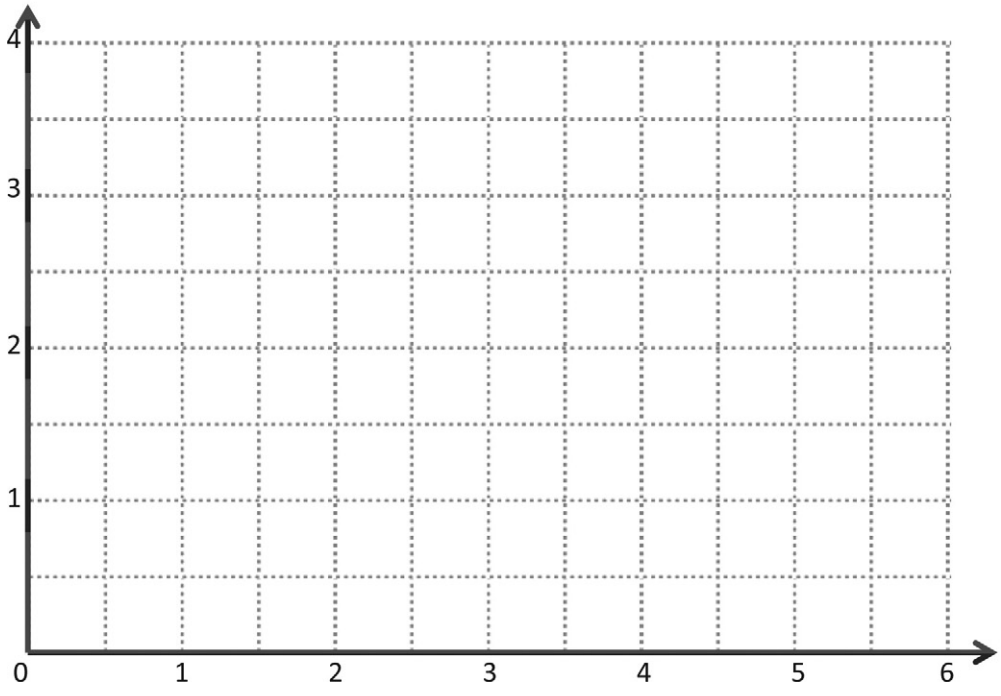
e. Explain the pattern you made use of when generating coordinate pairs for $L$ and $M$.

f. Give the coordinates of a point, $H$, such that $\overleftrightarrow{EF} \| \overleftrightarrow{GH}$.

$G$: $(1\frac{1}{2}, 4)$ $H$: (____, ____)

g. Explain how you chose the coordinates for $H$.

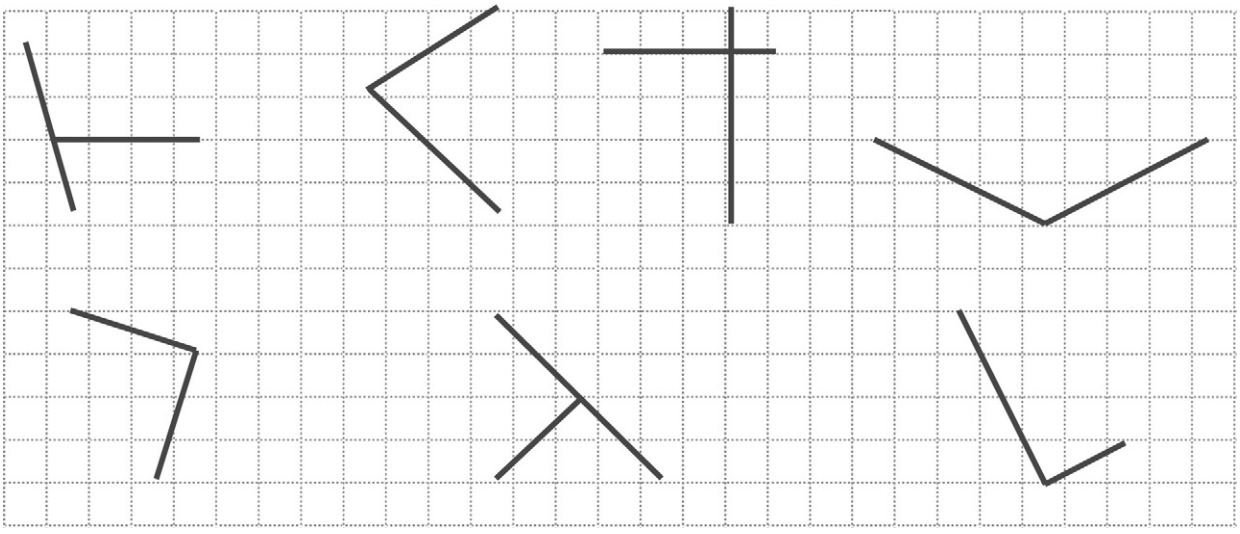



coordinate plane

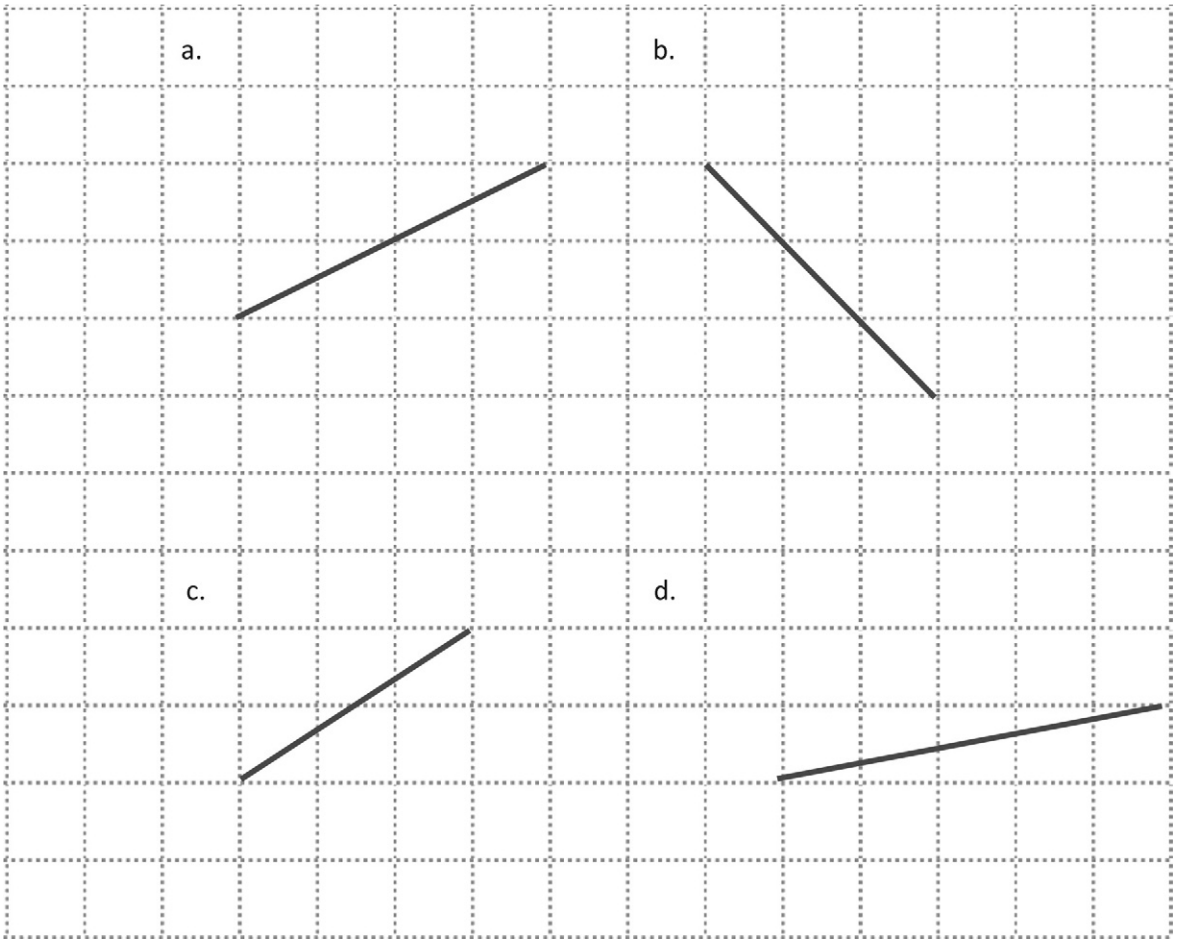
Name _____ Date _____

1. Circle the pairs of segments that are perpendicular.

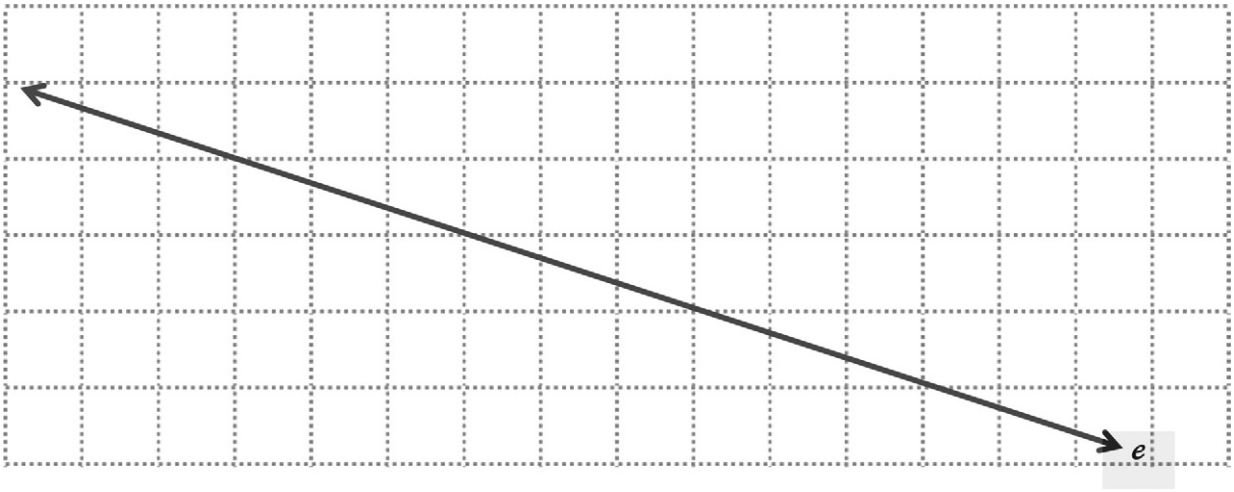


2. In the space below, use your right triangle templates to draw at least 3 different sets of perpendicular lines.

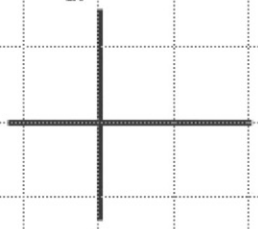
3. Draw a segment perpendicular to each given segment. Show your thinking by sketching triangles as needed.



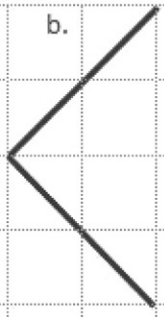

4. Draw 2 different lines perpendicular to line *e*.



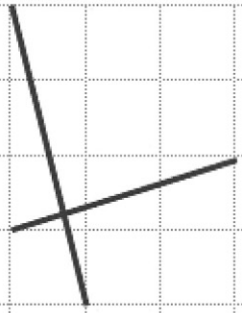
a.



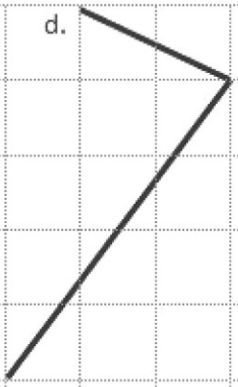
b.



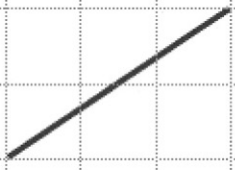
c.



d.

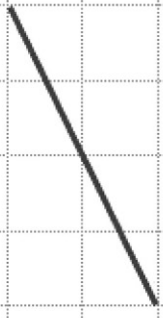


1.

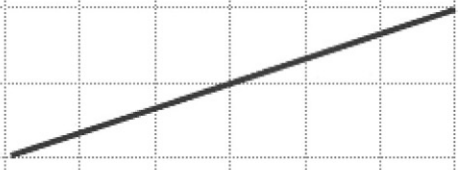


2.

3.



4.

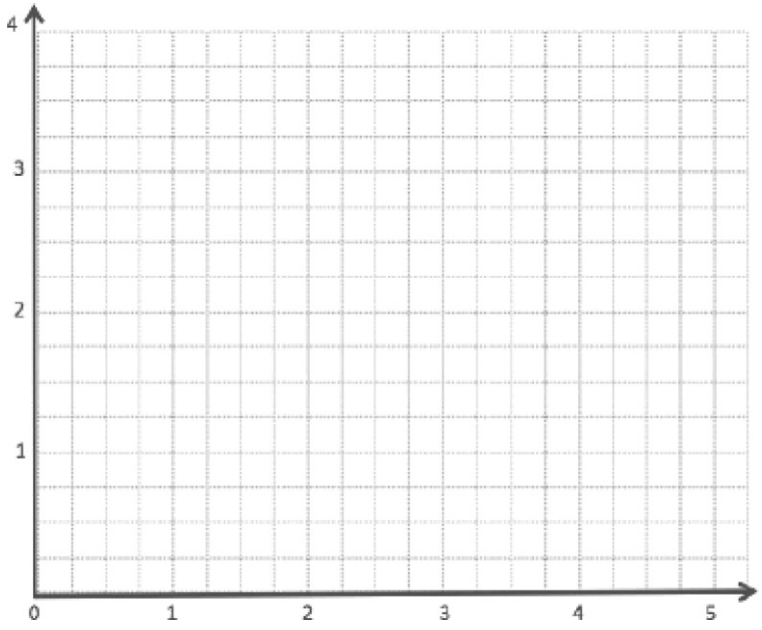


recording sheet

a. Complete the table for the rule *y is 1 more than half x*, graph the coordinate pairs, and draw a line to connect them.

b. Give the $y$-coordinate for the point on this line whose $x$-coordinate is $42\frac{1}{4}$.

| $x$ | $y$ |
|---|---|
| $\frac{1}{2}$ | |
| $1\frac{1}{2}$ | |
| $2\frac{1}{4}$ | |
| 3 | |




**Extension:** Give the $x$-coordinate for the point on this line whose $y$-coordinate is $5\frac{1}{2}$.

**Read** **Draw** **Write**

Name _____ Date _____

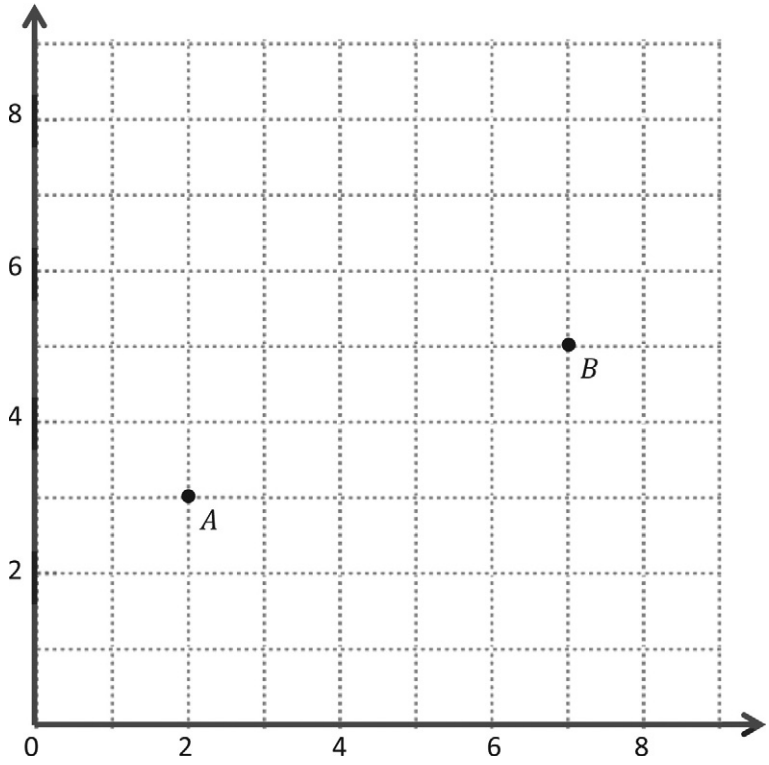
1. Use the coordinate plane below to complete the following tasks.

   a. Draw $\overline{AB}$.

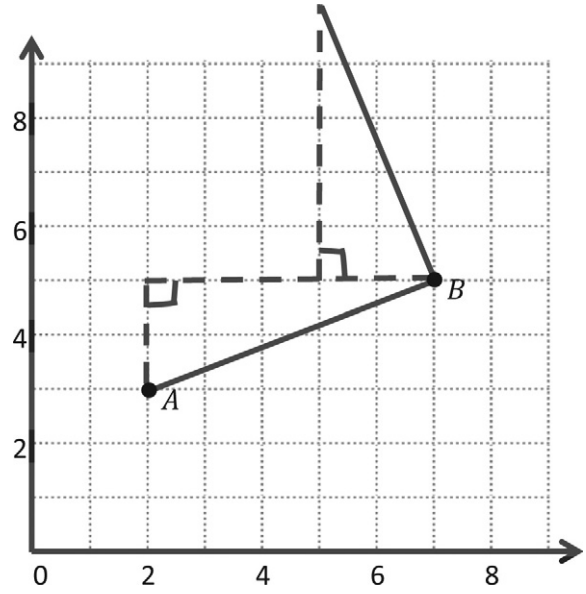
   b. Plot point $C$ (0, 8).

   c. Draw $\overline{AC}$.

   d. Explain how you know $\angle CAB$ is a right angle without measuring it.




   e. Sean drew the picture below to find a segment perpendicular to $\overline{AB}$. Explain why Sean is correct.



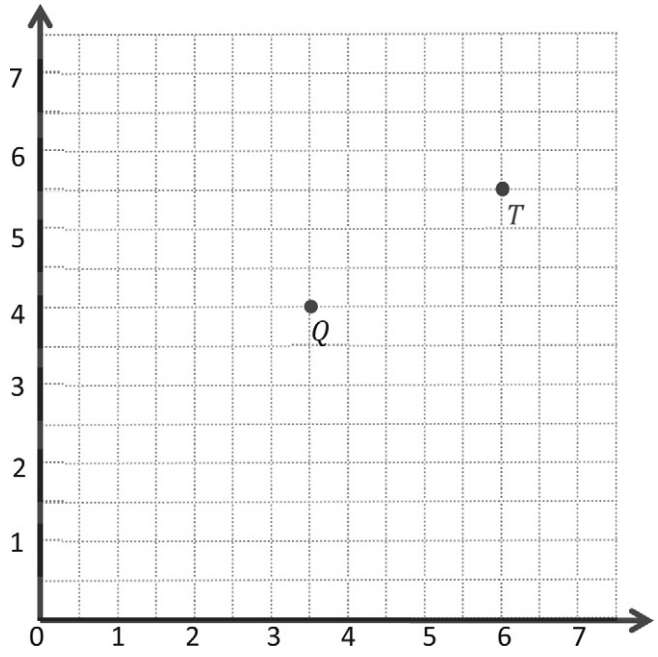
2. Use the coordinate plane below to complete the following tasks.

   a. Draw $\overline{QT}$.

   b. Plot point $R$ $(2, 6\frac{1}{2})$.

   c. Draw $\overline{QR}$.

   d. Explain how you know $\angle RQT$ is a right angle without measuring it.




   e. Compare the coordinates of points $Q$ and $T$. What is the difference of the $x$-coordinates? The $y$-coordinates?

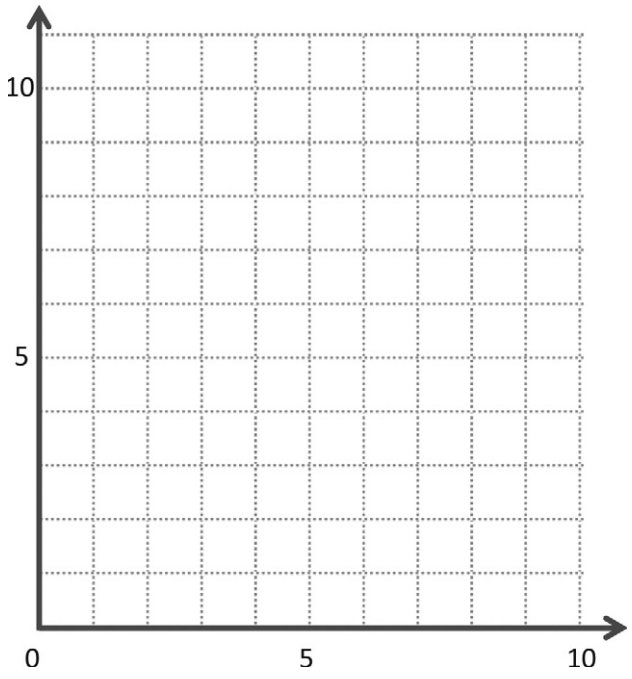
   f. Compare the coordinates of points $Q$ and $R$. What is the difference of the $x$-coordinates? The $y$-coordinates?

   g. What is the relationship of the differences you found in parts (e) and (f) to the triangles of which these two segments are a part?

3. $\overleftrightarrow{EF}$ contains the following points. $E$: (4, 1) $F$: (8, 7)

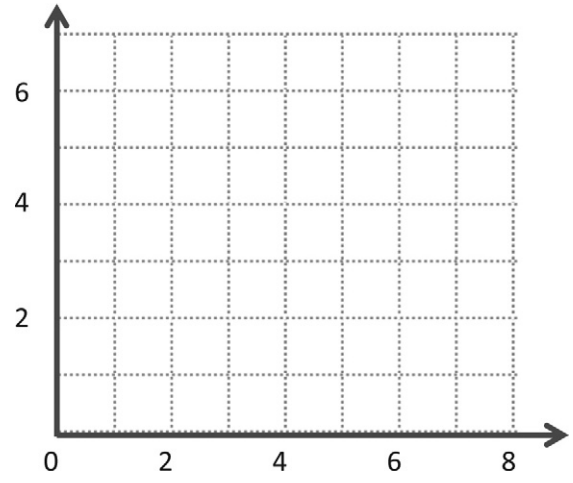
   Give the coordinates of a pair of points $G$ and $H$, such that $\overleftrightarrow{EF} \perp \overleftrightarrow{GH}$.

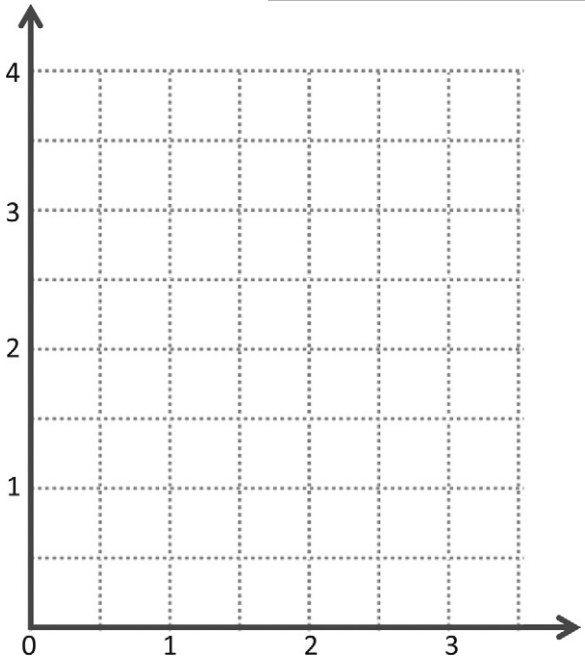
   $G$: (_____, _____) $H$: (_____, _____)




| | $(x, y)$ |
|---|---|
| $A$ | |
| $B$ | |
| $C$ | |

| | $(x, y)$ |
|---|---|
| $D$ | |
| $E$ | |
| $F$ | |



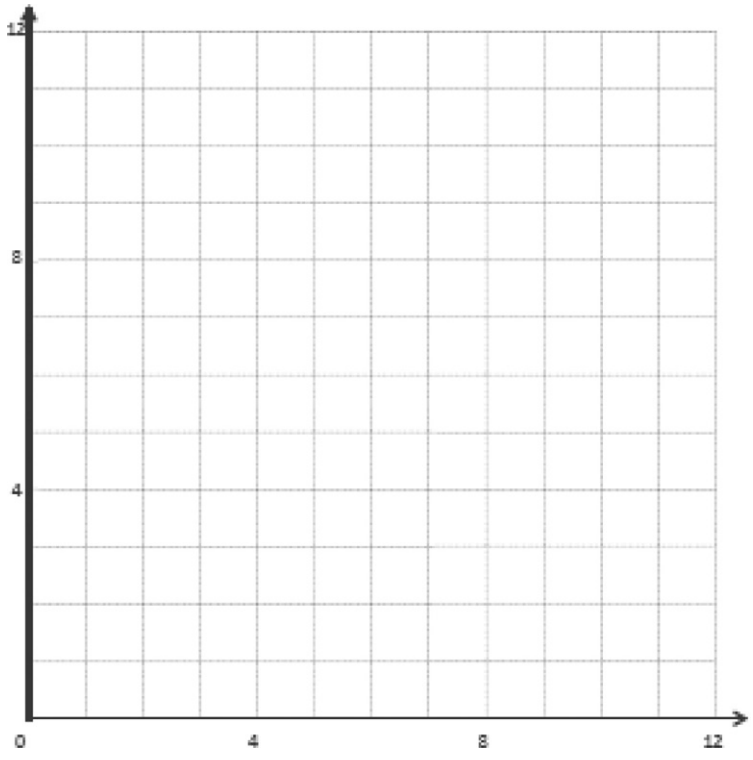

| | $(x, y)$ |
|---|---|
| $G$ | |
| $H$ | |
| $I$ | |

coordinate plane

Plot (10, 8) and (3, 3) on the coordinate plane, connect the points with a straightedge, and label them as $C$ and $D$.

a. Draw a segment parallel to $\overline{CD}$.

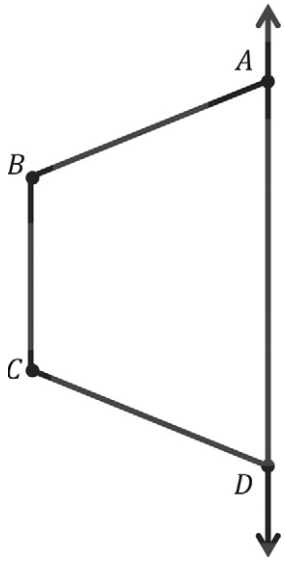
b. Draw a segment perpendicular to $\overline{CD}$.



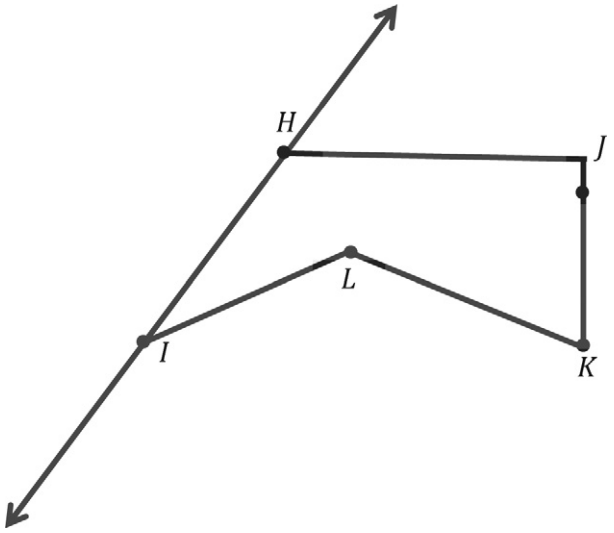

**Read** **Draw** **Write**

Name _____ Date _____

1. Draw to create a figure that is symmetric about $\overleftrightarrow{AD}$.




2. Draw precisely to create a figure that is symmetric about $\overleftrightarrow{HI}$.



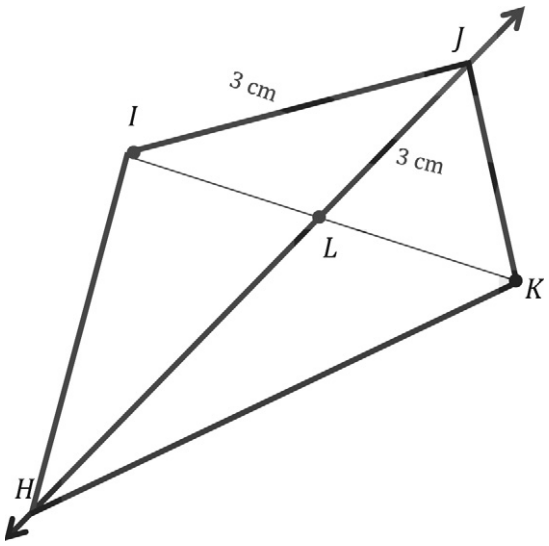
3. Complete the following construction in the space below.

   a. Plot 3 non-collinear points, $D$, $E$, and $F$.

   b. Draw $\overline{DE}$, $\overleftarrow{DF}$, and $\overline{DF}$.

   c. Plot point $G$, and draw the remaining sides, such that quadrilateral $DEFG$ is symmetric about $\overleftrightarrow{DF}$.

4. Stu says that quadrilateral $HIJK$ is symmetric about $\overleftrightarrow{HJ}$ because $IL = LK$. Use your tools to determine Stu's mistake. Explain your thinking.



Denis buys 8 meters of ribbon. He uses 3.25 meters for a gift. He uses the remaining ribbon equally to tie bows on 5 boxes. How much ribbon did he use on each box?

**Read** **Draw** **Write**

Name _____ Date _____

1. Use the plane to the right to complete the following tasks.

   a. Draw a line $t$ whose rule is $y$ *is always 0.7*.

   b. Plot the points from Table A on the grid in order. Then, draw line segments to connect the points.

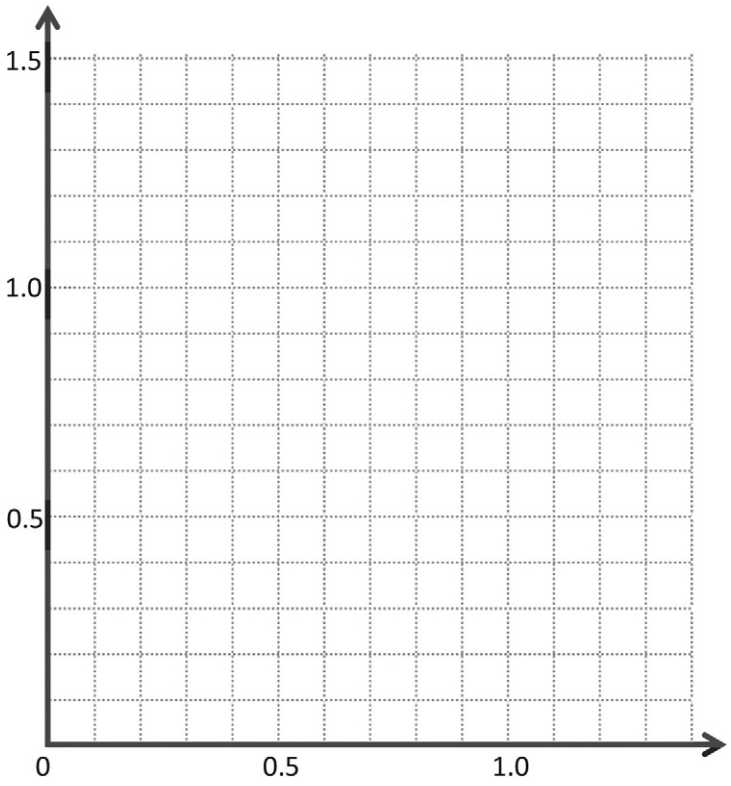



**Table A**

| $(x, y)$ |
|---|
| (0.1, 0.5) |
| (0.2, 0.3) |
| (0.3, 0.5) |
| (0.5, 0.1) |
| (0.6, 0.2) |
| (0.8, 0.2) |
| (0.9, 0.1) |
| (1.1, 0.5) |
| (1.2, 0.3) |
| (1.3, 0.5) |

**Table B**

| $(x, y)$ |
|---|
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |

   c. Complete the drawing to create a figure that is symmetric about line $t$. For each point in Table A, record the corresponding point on the other side of the line of symmetry in Table B.

   d. Compare the $y$-coordinates in Table A with those in Table B. What do you notice?

   e. Compare the $x$-coordinates in Table A with those in Table B. What do you notice?

2. This figure has a second line of symmetry. Draw the line on the plane, and write the rule for this line.

3. Use the plane below to complete the following tasks.

   a. Draw a line $u$ whose rule is $y$ *is equal to* $x + \frac{1}{4}$.

   b. Construct a figure with a total of 6 points, all on the same side of the line.

   c. Record the coordinates of each point, in the order in which they were drawn, in Table A.

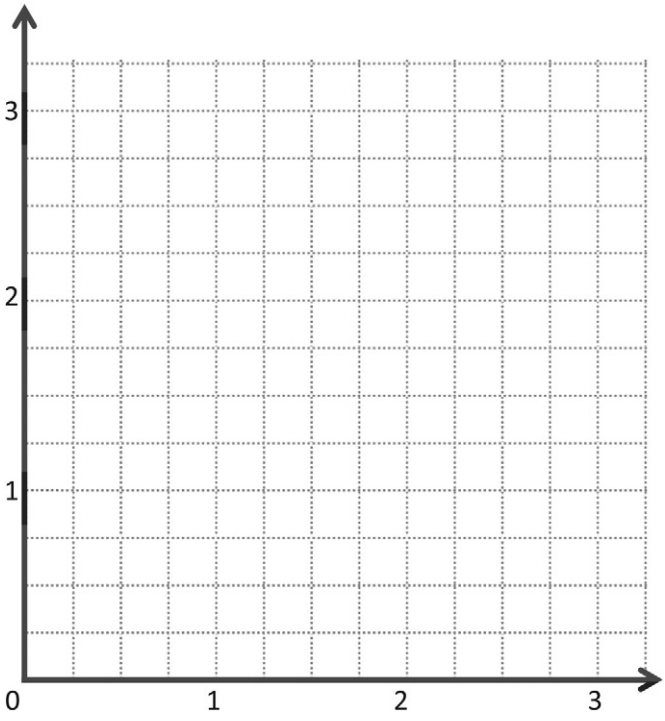
   d. Swap your paper with a neighbor, and have her complete parts (e–f), below.

**Table A**

| $(x, y)$ |
|---|
| |
| |
| |
| |
| |
| |

**Table B**

| $(x, y)$ |
|---|
| |
| |
| |
| |
| |
| |




   e. Complete the drawing to create a figure that is symmetric about $u$. For each point in Table A, record the corresponding point on the other side of the line of symmetry in Table B.

   f. Explain how you found the points symmetric to your partner's about $u$.

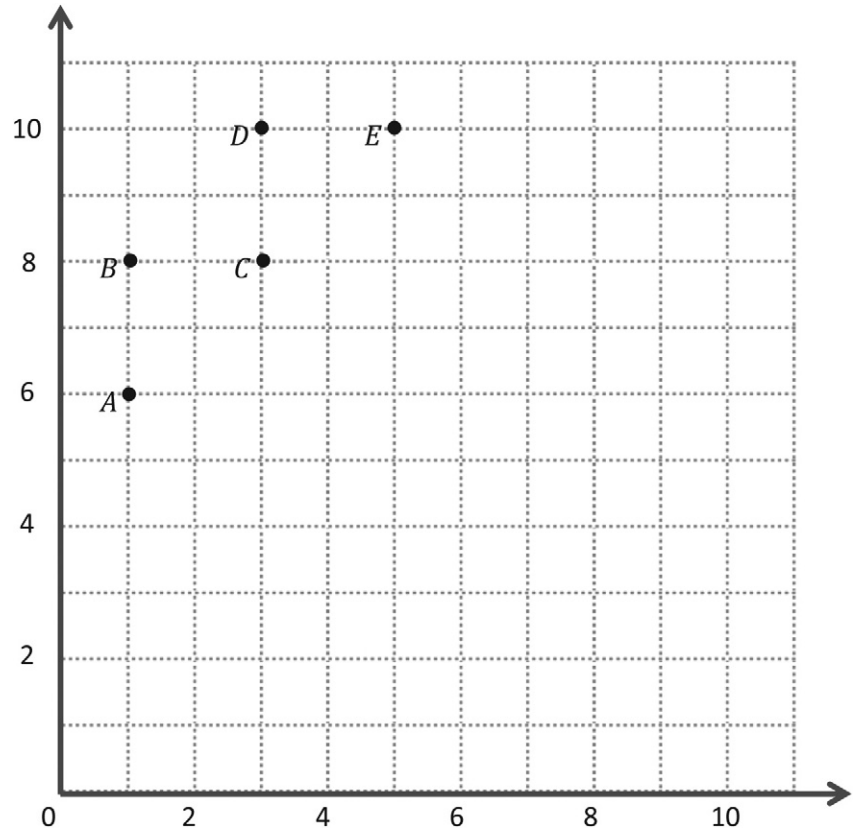



**Table A**

| Point | $(x, y)$ |
|---|---|
| $A$ | |
| $B$ | |
| $C$ | |
| $D$ | |
| $E$ | |

**Table C**

| $(x, y)$ |
|---|
| |
| |
| |
| |
| |

**Table B**

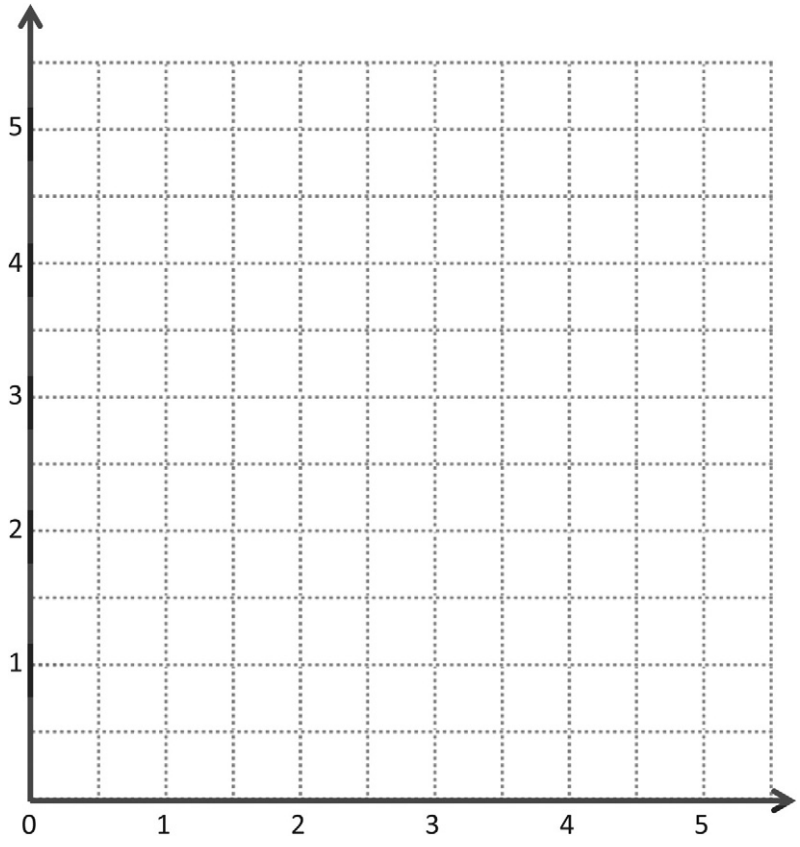
| Point | $(x, y)$ |
|---|---|
| $I$ | |
| $H$ | |
| $G$ | |
| $F$ | |

**Table D**

| $(x, y)$ |
|---|
| |
| |
| |
| |

**Table E**

| Point | $(x, y)$ |
|---|---|
| $A$ | (1, 1) |
| $B$ | $(1\frac{1}{2}, 3\frac{1}{2})$ |
| $C$ | (2, 3) |
| $D$ | $(2\frac{1}{2}, 3\frac{1}{2})$ |
| $E$ | $(2\frac{1}{2}, 2\frac{1}{2})$ |
| $F$ | $(3\frac{1}{2}, 2\frac{1}{2})$ |
| $G$ | (3, 2) |
| $H$ | $(3\frac{1}{2}, 1\frac{1}{2})$ |

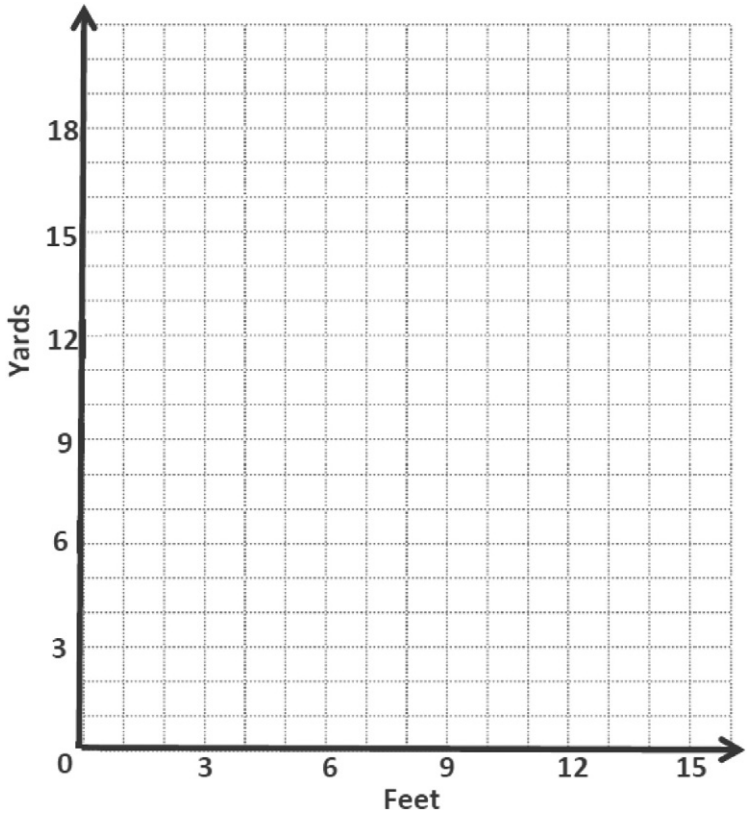



coordinate plane

Three feet are equal to 1 yard. The following table shows the conversion. Use the information to complete the following tasks:

| Feet | Yards |
|---|---|
| 3 | 1 |
| 6 | 2 |
| 9 | 3 |
| 12 | 4 |

1. Plot each set of coordinates.
2. Use a straightedge to connect each point.
3. Plot one more point on this line, and write its coordinates.




**Read** **Draw** **Write**

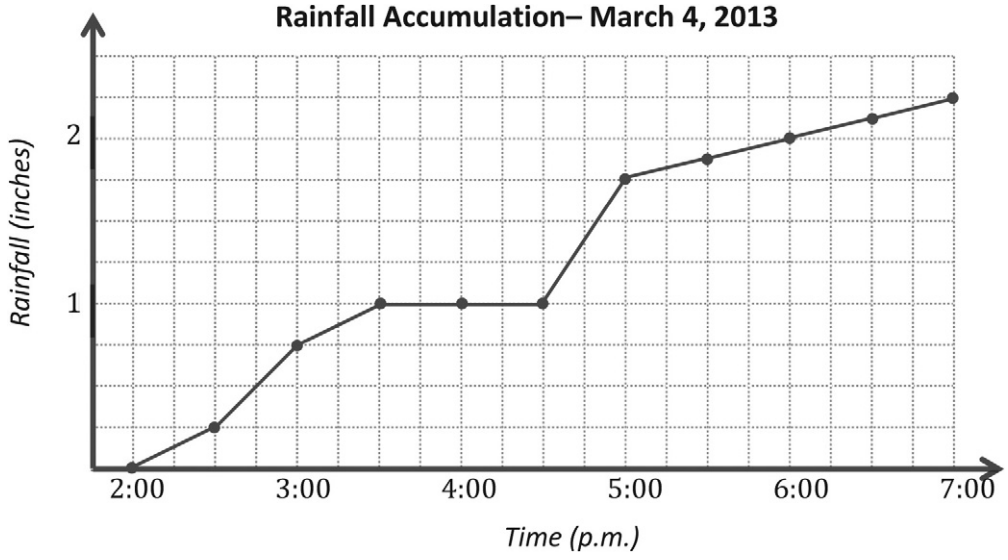
4. 27 feet can be converted to how many yards?

5. Write the rule that describes the line.

**Read** **Draw** **Write**

Name _____ Date _____

1. The line graph below tracks the rain accumulation, measured every half hour, during a rainstorm that began at 2:00 p.m. and ended at 7:00 p.m. Use the information in the graph to answer the questions that follow.




a. How many inches of rain fell during this five-hour period?

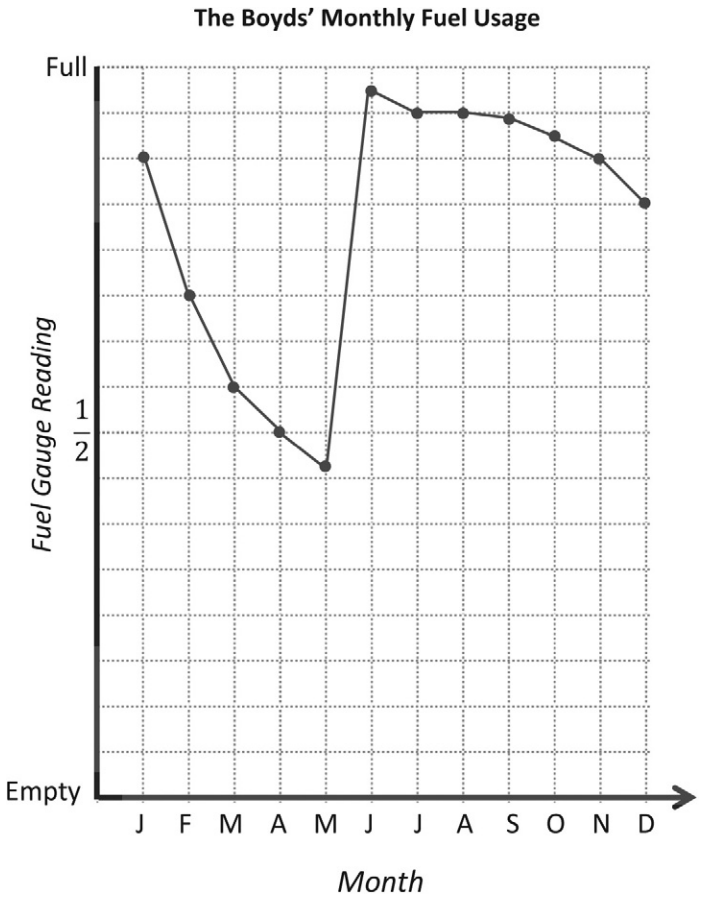
b. During which half-hour period did $\frac{1}{2}$ inch of rain fall? Explain how you know.

c. During which half-hour period did rain fall most rapidly? Explain how you know.

d. Why do you think the line is horizontal between 3:30 p.m. and 4:30 p.m.?

e. For every inch of rain that fell here, a nearby community in the mountains received a foot and a half of snow. How many inches of snow fell in the mountain community between 5:00 p.m. and 7:00 p.m.?

2. Mr. Boyd checks the gauge on his home's fuel tank on the first day of every month. The line graph to the right was created using the data he collected.




a. According to the graph, during which month(s) does the amount of fuel decrease most rapidly?

b. The Boyds took a month-long vacation. During which month did this most likely occur? Explain how you know using the data in the graph.

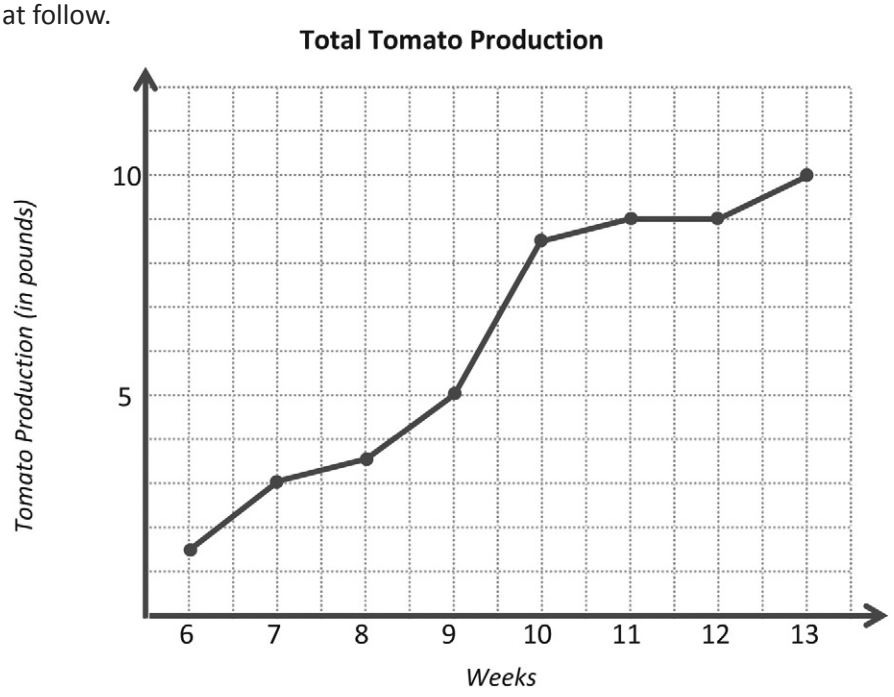
c. Mr. Boyd's fuel company filled his tank once this year. During which month did this most likely occur? Explain how you know.

d. The Boyd family's fuel tank holds 284 gallons of fuel when full. How many gallons of fuel did the Boyds use in February?

e. Mr. Boyd pays $3.54 per gallon of fuel. What is the cost of the fuel used in February and March?

Name _____ Date _____

1. The line graph below tracks the total tomato production for one tomato plant. The total tomato production is plotted at the end of each of 8 weeks. Use the information in the graph to answer the questions that follow.




a. How many pounds of tomatoes did this plant produce at the end of 13 weeks?

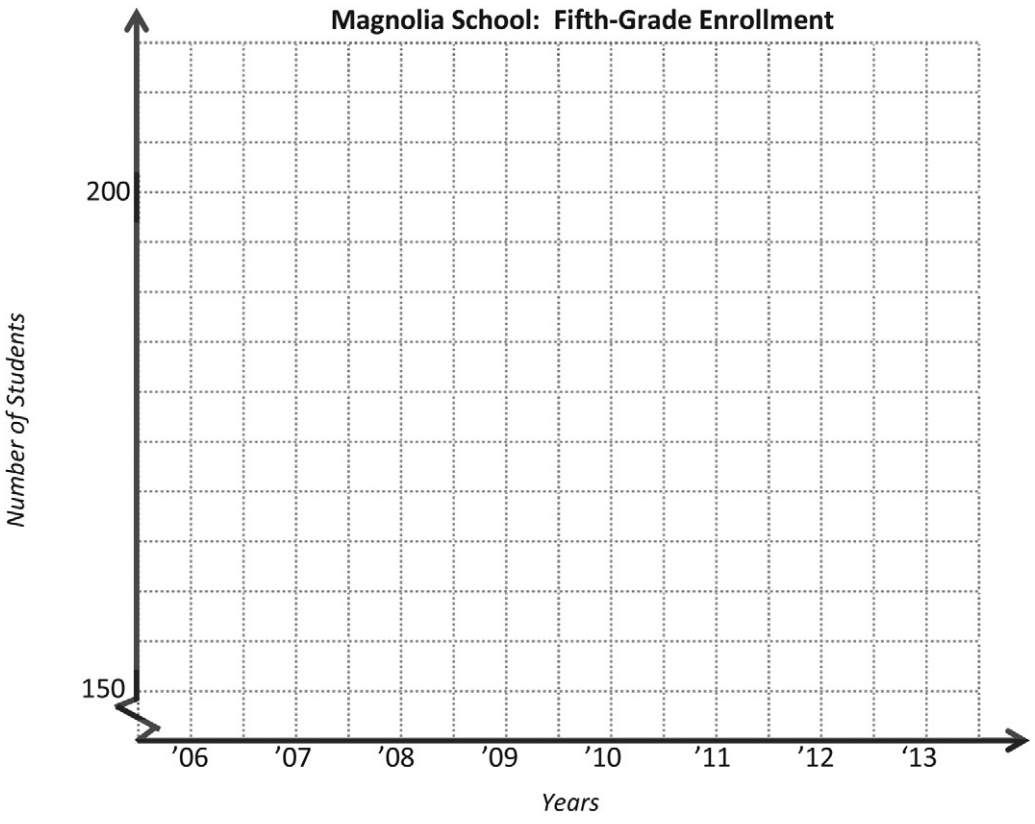
b. How many pounds of tomatoes did this plant produce from Week 7 to Week 11? Explain how you know.

c. Which one-week period showed the greatest change in tomato production? The least? Explain how you know.

d. During Weeks 6–8, Jason fed the tomato plant just water. During Weeks 8–10, he used a mixture of water and Fertilizer A, and in Weeks 10–13, he used water and Fertilizer B on the tomato plant. Compare the tomato production for these periods of time.

2. Use the story context below to sketch a line graph. Then, answer the questions that follow.

   The number of fifth-grade students attending Magnolia School has changed over time. The school opened in 2006 with 156 students in the fifth grade. The student population grew the same amount each year before reaching its largest class of 210 students in 2008. The following year, Magnolia lost one-seventh of its fifth graders. In 2010, the enrollment dropped to 154 students and remained constant in 2011. For the next two years, the enrollment grew by 7 students each year.




   a. How many more fifth-grade students attended Magnolia in 2009 than in 2013?

   b. Between which two consecutive years was there the greatest change in student population?

   c. If the fifth-grade population continues to grow in the same pattern as in 2012 and 2013, in what year will the number of students match 2008's enrollment?

Student _____ Team _____ Date _____ Problem 1

**Pierre's Paper**

Pierre folded a square piece of paper vertically to make two rectangles. Each rectangle had a perimeter of 39 inches. How long is each side of the original square? What is the area of the original square? What is the area of one of the rectangles?

Student _____ Team _____ Date _____ Problem 2

**Shopping with Elise**

Elise saved $184. She bought a scarf, a necklace, and a notebook. After her purchases, she still had $39.50. The scarf cost three-fifths the cost of the necklace, and the notebook was one-sixth as much as the scarf. What was the cost of each item? How much more did the necklace cost than the notebook?

Student _____ Team _____ Date _____ Problem 3

**The Hewitt's Carpet**

The Hewitt family is buying carpet for two rooms. The dining room is a square that measures 12 feet on each side. The den is 9 yards by 5 yards. Mrs. Hewitt has budgeted $2,650 for carpeting both rooms. The green carpet she is considering costs $42.75 per square yard, and the brown carpet's price is $4.95 per square foot. What are the ways she can carpet the rooms and stay within her budget?

Student _____ Team _____ Date _____ Problem 4

**AAA Taxi**

AAA Taxi charges $1.75 for the first mile and $1.05 for each additional mile. How far could Mrs. Leslie travel for $20 if she tips the cab driver $2.50?



**Lessons 21–23:** Make sense of complex, multi-step problems, and persevere in solving them. Share and critique peer solutions.

Student _____ Team _____ Date _____ Problem 5

**Pumpkins and Squash**

Three pumpkins and two squash weigh 27.5 pounds. Four pumpkins and three squash weigh 37.5 pounds. Each pumpkin weighs the same as the other pumpkins, and each squash weighs the same as the other squash. How much does each pumpkin weigh? How much does each squash weigh?

Student _____ Team _____ Date _____ Problem 6

**Toy Cars and Trucks**

Henry had 20 convertibles and 5 trucks in his miniature car collection. After Henry's aunt bought him some more miniature trucks, Henry found that one-fifth of his collection consisted of convertibles. How many trucks did his aunt buy?

Student _____ Team _____ Date _____ Problem 7

**Pairs of Scouts**

Some girls in a Girl Scout troop are pairing up with some boys in a Boy Scout troop to practice square dancing. Two-thirds of the girls are paired with three-fifths of the boys. What fraction of the scouts are square dancing?

(Each pair is one Girl Scout and one Boy Scout. The pairs are only from these two troops.)

Student _____ Team _____ Date _____ Problem 8

**Sandra's Measuring Cups**

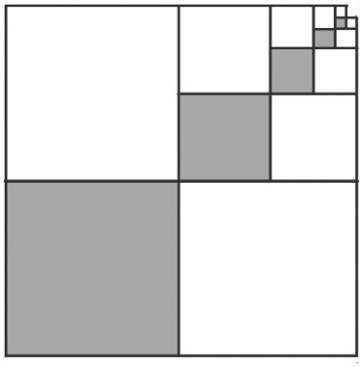
Sandra is making cookies that require $5\frac{1}{2}$ cups of oatmeal. She has only two measuring cups: a one-half cup and a three-fourths cup. What is the smallest number of scoops that she could make in order to get $5\frac{1}{2}$ cups?



**Lessons 21–23:** Make sense of complex, multi-step problems, and persevere in solving them. Share and critique peer solutions.

Student _____ Team _____ Date _____ Problem 9

**Blue Squares**



The dimensions of each successive blue square pictured to the right are half that of the previous blue square. The lower left blue square measures 6 inches by 6 inches.

a. Find the area of the shaded part.
b. Find the total area of the shaded and unshaded parts.
c. What fraction of the figure is shaded?

The market sells watermelons for $0.39 per pound and apples for $0.43 per pound. Write an expression that shows how much Carmen spends for a watermelon that weighs 11.5 pounds and a bag of apples that weighs 3.2 pounds.

**Read** **Draw** **Write**

Name _____ Date _____

1. For each written phrase, write a numerical expression, and then evaluate your expression.

a. Three fifths of the sum of thirteen and six

Numerical expression:

Solution:

b. Subtract four thirds from one seventh of sixty-three.

Numerical expression:

Solution:

c. Six copies of the sum of nine fifths and three

Numerical expression:

Solution:

d. Three fourths of the product of four fifths and fifteen

Numerical expression:

Solution:

2. Write at least 2 numerical expressions for each phrase below. Then, solve.

   a. Two thirds of eight

   b. One sixth of the product of four and nine

3. Use <, >, or = to make true number sentences without calculating. Explain your thinking.

   a. $217 \times (42 + \frac{48}{5})$ ◯ $(217 \times 42) + \frac{48}{5}$

   b. $(687 \times \frac{3}{16}) \times \frac{7}{12}$ ◯ $(687 \times \frac{3}{16}) \times \frac{3}{12}$

   c. $5 \times 3.76 + 5 \times 2.68$ ◯ $5 \times 6.99$

| | | | |
|---|---|---|---|
| six sevenths of nine | two thirds the sum of twenty-three and fifty-seven | forty-three less than three fifths of the product of ten and twenty | five sixths the difference of three hundred twenty-nine and two hundred eighty-one |
| three times as much as the sum of three fourths and two thirds | the difference between thirty thirties and twenty-eight thirties | twenty-seven more than half the sum of four and one eighth and six and two thirds | the sum of eighty-eight and fifty-six divided by twelve |
| the product of nine and eight divided by four | one sixth the product of twelve and four | six copies of the sum of six twelfths and three fourths | double three fourths of eighteen |

expression cards

| | | |
|---|---|---|
| $96 \times (63 + \frac{17}{12})$ | | $(96 \times 63) + \frac{17}{12}$ |
| $(437 \times \frac{9}{15}) \times \frac{6}{8}$ | | $(437 \times \frac{9}{15}) \times \frac{7}{8}$ |
| $4 \times 8.35 + 4 \times 6.21$ | | $4 \times 15.87$ |
| $\frac{6}{7} \times (3{,}065 + 4{,}562)$ | | $(3{,}065 + 4{,}562) + \frac{6}{7}$ |
| $(8.96 \times 3) + (5.07 \times 8)$ | | $(8.96 + 3) \times (5.07 + 8)$ |
| $(297 \times \frac{16}{15}) + \frac{8}{3}$ | | $(297 \times \frac{13}{15}) + \frac{8}{3}$ |
| $\frac{12}{7} \times (\frac{5}{4} + \frac{5}{9})$ | | $\frac{12}{7} \times \frac{5}{4} + \frac{12}{7} \times \frac{5}{9}$ |

comparing expressions game board

Name _____ Date _____

1. Use the RDW process to solve the word problems below.

   a. Julia completes her homework in an hour. She spends $\frac{7}{12}$ of the time doing her math homework and $\frac{1}{6}$ of the time practicing her spelling words. The rest of the time she spends reading. How many minutes does Julia spend reading?

   b. Fred has 36 marbles. Elise has $\frac{8}{9}$ as many marbles as Fred. Annika has $\frac{3}{4}$ as many marbles as Elise. How many marbles does Annika have?

2. Write and solve a word problem that might be solved using the expressions in the chart below.

| Expression | Word Problem | Solution |
|---|---|---|
| $\frac{2}{3} \times 18$ | | |
| $(26 + 34) \times \frac{5}{6}$ | | |
| $7 - \left(\frac{5}{12} + \frac{1}{2}\right)$ | | |

Name _____ Date _____

1. Answer the following questions about fluency.
   a. What does being fluent with a math skill mean to you?

   b. Why is fluency with certain math skills important?

   c. With which math skills do you think you should be fluent?

   d. With which math skills do you feel most fluent? Least fluent?

   e. How can you continue to improve your fluency?

2. Use the chart below to list skills from today's activities with which you are fluent.

| Fluent Skills |
| --- |
| |
| |
| |
| |

3. Use the chart below to list skills we practiced today with which you are less fluent.

| Skills to Practice More |
| --- |
| |
| |
| |
| |

### Write Fractions as Mixed Numbers

Materials: (S) Personal white board

T: (Write $\frac{13}{2}$ = ____÷ ____ = ____ .) Write the fraction as a division problem and mixed number.

S: (Write $\frac{13}{2} = 13 \div 2 = 6\frac{1}{2}$.)

More practice!

$\frac{11}{2}, \frac{17}{2}, \frac{44}{2}, \frac{31}{10}, \frac{23}{10}, \frac{47}{10}, \frac{89}{10}, \frac{8}{3}, \frac{13}{3}, \frac{26}{3}, \frac{9}{4}, \frac{13}{4}, \frac{15}{4}$, and $\frac{35}{4}$.

### Fraction of a Set

Materials: (S) Personal white board

T: (Write $\frac{1}{2} \times 10$.) Draw a tape diagram to model the whole number.

S: (Draw a tape diagram, and label it 10.)

T: Draw a line to split the tape diagram in half.

S: (Draw a line.)

T: What is the value of each part of your tape diagram?

S: 5.

T: So, what is $\frac{1}{2}$ of 10?

S: 5.

More practice!

$8 \times \frac{1}{2}$, $8 \times \frac{1}{4}$, $6 \times \frac{1}{3}$, $30 \times \frac{1}{6}$, $42 \times \frac{1}{7}$, $42 \times \frac{1}{6}$, $48 \times \frac{1}{8}$, $54 \times \frac{1}{9}$, and $54 \times \frac{1}{6}$.

### Convert to Hundredths

Materials: (S) Personal white board

T: (Write $\frac{3}{4} = \frac{\quad}{100}$ .) 4 times what factor equals 100?

S: 25.

T: Write the equivalent fraction.

S: (Write $\frac{3}{4} = \frac{75}{100}$ .)

More practice!

$\frac{3}{4} = \frac{\quad}{100}$, $\frac{1}{50} = \frac{\quad}{100}$, $\frac{3}{50} = \frac{\quad}{100}$, $\frac{1}{20} = \frac{\quad}{100}$, $\frac{3}{20} = \frac{\quad}{100}$, $\frac{1}{25} = \frac{\quad}{100}$, and $\frac{2}{25} = \frac{\quad}{100}$.

### Multiply a Fraction and a Whole Number

Materials: (S) Personal white board

T: (Write $\frac{8}{4}$.) Write the corresponding division sentence.

S: (Write 8 ÷ 4 = 2.)

T: (Write $\frac{1}{4} \times 8$.) Write the complete multiplication sentence.

S: (Write $\frac{1}{4} \times 8 = 2$.)

More practice!

$\frac{18}{6}, \frac{15}{3}, \frac{18}{3}, \frac{27}{9}, \frac{54}{6}, \frac{51}{3}$, and $\frac{63}{7}$.

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fluency activities

## Multiply Mentally

Materials: (S) Personal white board

T: (Write 9 × 10.) On your personal white board, write the complete multiplication sentence.
S: (Write 9 × 10 = 90.)
T: (Write 9 × 9 = 90 – ____ below 9 × 10 = 90.) Write the number sentence, filling in the blank.
S: (Write 9 × 9 = 90 – 9.)
T: 9 × 9 is…?
S: 81.

More practice!

9 × 99, 15 × 9, and 29 × 99.

## One Unit More

Materials: (S) Personal white board

T: (Write 5 tenths.) On your personal white board, write the decimal that's one-tenth more than 5 tenths.
S: (Write 0.6.)

More practice!

5 hundredths, 5 thousandths, 8 hundredths, and 2 thousandths. Specify the unit of increase.

T: (Write 0.052.) Write one more thousandth.
S: (Write 0.053.)

More practice!

1 tenth more than 35 hundredths,
1 thousandth more than 35 hundredths, and
1 hundredth more than 438 thousandths.

## Find the Product

Materials: (S) Personal white board

T: (Write 4 × 3.) Complete the multiplication sentence giving the second factor in unit form.
S: (Write 4 × 3 ones = 12 ones.)
T: (Write 4 × 0.2.) Complete the multiplication sentence giving the second factor in unit form.
S: (Write 4 × 2 tenths = 8 tenths.)
T: (Write 4 × 3.2.) Complete the multiplication sentence giving the second factor in unit form.
S: (Write 4 × 3 ones 2 tenths = 12 ones 8 tenths.)
T: Write the complete multiplication sentence.
S: (Write 4 × 3.2 = 12.8.)

More practice!

4 × 3.21, 9 × 2, 9 × 0.1, 9 × 0.03, 9 × 2.13, 4.012 × 4, and 5 × 3.2375.

## Add and Subtract Decimals

Materials: (S) Personal white board

T: (Write 7 ones + 258 thousandths + 1 hundredth = ____.) Write the addition sentence in decimal form.
S: (Write 7 + 0.258 + 0.01 = 7.268.)

More practice!

7 ones + 258 thousandths + 3 hundredths,
6 ones + 453 thousandths + 4 hundredths,
2 ones + 37 thousandths + 5 tenths, and
6 ones + 35 hundredths + 7 thousandths.

T: (Write 4 ones + 8 hundredths – 2 ones = ____ ones ____ hundredths.) Write the subtraction sentence in decimal form.
S: (Write 4.08 – 2 = 2.08.)

More practice!

9 tenths + 7 thousandths – 4 thousandths,
4 ones + 582 thousandths – 3 hundredths,
9 ones + 708 thousandths – 4 tenths, and
4 ones + 73 thousandths – 4 hundredths.

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fluency activities

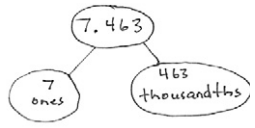
## Decompose Decimals

Materials: (S) Personal white board

T: (Project 7.463.) Say the number.

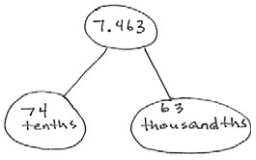
S: 7 and 463 thousandths.

T: Represent this number in a two-part number bond with ones as one part and thousandths as the other part.



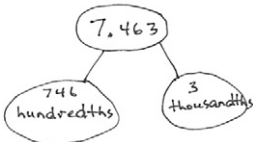

S: (Draw.)

T: Represent it again with tenths and thousandths.




S: (Draw.)

T: Represent it again with hundredths and thousandths.




More practice!

8.972 and 6.849.

## Find the Volume

Materials: (S) Personal white board

T: On your personal white board, write the formula for finding the volume of a rectangular prism.

S: (Write $V = l \times w \times h$.)

T: (Draw and label a rectangular prism with a length of 5 cm, width of 6 cm, and height of 2 cm.) Write a multiplication sentence to find the volume of this rectangular prism.

S: (Beneath $V = l \times w \times h$, write $V = 5 \text{ cm} \times 6 \text{ cm} \times 2 \text{ cm}$. Beneath it, write $V = 60 \text{ cm}^3$.)

More practice!

$l = 7$ ft, $w = 9$ ft, $h = 3$ ft;

$l = 6$ in, $w = 6$ in, $h = 5$ in; and

$l = 4$ cm, $w = 8$ cm, $h = 2$ cm.

## Make a Like Unit

Materials: (S) Personal white board

T: I will say two unit fractions. You make the like unit, and write it on your personal white board. Show your board at the signal.

T: $\frac{1}{3}$ and $\frac{1}{2}$. (Pause. Signal.)

S: (Write and show sixths.)

More practice!

$\frac{1}{4}$ and $\frac{1}{3}$, $\frac{1}{2}$ and $\frac{1}{4}$, $\frac{1}{6}$ and $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{12}$, $\frac{1}{6}$ and $\frac{1}{8}$, and $\frac{1}{3}$ and $\frac{1}{9}$.

## Unit Conversions

Materials: (S) Personal white board

T: (Write 12 in = ____ ft.) On your personal white board, write 12 inches is the same as how many feet?

S: (Write 1 foot.)

More practice!

24 in, 36 in, 54 in, and 76 in.

T: (Write 1 ft = ____ in.) Write 1 foot is the same as how many inches?

S: (Write 12 inches.)

More practice!

2 ft, 2.5 ft, 3 ft, 3.5 ft, 4 ft, 4.5 ft, 9 ft, and 9.5 ft.

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fluency activities

### Compare Decimal Fractions

Materials: (S) Personal white board

T: (Write 13.78 ___ 13.86.) On your personal white board, compare the numbers using the greater than, less than, or equal sign.
S: (Write 13.78 < 13.86.)

More practice!

0.78____$\frac{78}{100}$, 439.3 ___ 4.39, 5.08 ___ fifty-eight tenths, and thirty-five and 9 thousandths ___ 4 tens.

### Round to the Nearest One

Materials: (S) Personal white board

T: (Write 3 ones 2 tenths.) Write 3 ones and 2 tenths as a decimal.
S: (Write 3.2.)
T: (Write 3.2 ≈ __.) Round 3 and 2 tenths to the nearest whole number.
S: (Write 3.2 ≈ 3.)

More practice!

3.7, 13.7, 5.4, 25.4, 1.5, 21.5, 6.48, 3.62, and 36.52.

### Multiplying Fractions

Materials: (S) Personal white board

T: (Write $\frac{1}{2}\times\frac{1}{3}=$ ___.) Write the complete multiplication sentence.
S: (Write $\frac{1}{2}\times\frac{1}{3}=\frac{1}{6}$.)
T: (Write $\frac{1}{2}\times\frac{3}{4}=$ ___.) Write the complete multiplication sentence.
S: (Write $\frac{1}{2}\times\frac{3}{4}=\frac{3}{8}$.)
T: (Write $\frac{2}{5}\times\frac{2}{3}=$ ___.) Write the complete multiplication sentence.
S: (Write $\frac{2}{5}\times\frac{2}{3}=\frac{4}{15}$.)

More practice!

$\frac{1}{2}\times\frac{1}{5}$, $\frac{1}{2}\times\frac{3}{5}$, $\frac{3}{4}\times\frac{3}{5}$, $\frac{4}{5}\times\frac{2}{3}$, and $\frac{3}{4}\times\frac{5}{6}$.

### Divide Numbers by Unit Fractions

Materials: (S) Personal white board

T: (Write $1\div\frac{1}{2}$.) How many halves are in 1?
S: 2.
T: (Write $1\div\frac{1}{2}=2$. Beneath it, write $2\div\frac{1}{2}$.) How many halves are in 2?
S: 4.
T: (Write $2\div\frac{1}{2}=4$. Beneath it, write $3\div\frac{1}{2}$.) How many halves are in 3?
S: 6.
T: (Write $3\div\frac{1}{2}=6$. Beneath it, write $7\div\frac{1}{2}$.) Write the complete division sentence.
S: (Write $7\div\frac{1}{2}=14$.)

More practice!

$1\div\frac{1}{3}$, $2\div\frac{1}{5}$, $9\div\frac{1}{4}$, and $3\div\frac{1}{8}$.

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fluency activities

| | | | |
|---|---|---|---|
| A quadrilateral with two pairs of equal sides that are also adjacent. | An angle that turns through $\frac{1}{360}$ of a circle. | A quadrilateral with at least one pair of parallel lines. | A closed figure made up of line segments. |
| Measurement of space or capacity. | A quadrilateral with opposite sides that are parallel. | An angle measuring 90 degrees. | The union of two different rays sharing a common vertex. |
| The number of square units that cover a two-dimensional shape. | Two lines in a plane that do not intersect. | The number of adjacent layers of the base that form a rectangular prism. | A three-dimensional figure with six square sides. |
| A quadrilateral with four 90-degree angles. | A polygon with 4 sides and 4 angles. | A parallelogram with all equal sides. | Cubes of the same size used for measuring. |
| Two intersecting lines that form 90-degree angles. | A three-dimensional figure with six rectangular sides. | A three-dimensional figure. | Any flat surface of a 3-D figure. |
| A line that cuts a line segment into two equal parts at 90 degrees. | Squares of the same size, used for measuring. | A rectangular prism with only 90-degree angles. | One face of a 3-D solid, often thought of as the surface upon which the solid rests. |

geometry definitions

| | | | |
|---|---|---|---|
| Base | Volume of a Solid | Cubic Units | Kite |
| Height | One-Degree Angle | Face | Trapezoid |
| Right Rectangular Prism | Perpendicular Bisector | Cube | Area |
| Perpendicular Lines | Rhombus | Parallel Lines | Angle |
| Polygon | Rectangular Prism | Parallelogram | Rectangle |
| Right Angle | Quadrilateral | Solid Figure | Square Units |

geometry terms

**Attribute Buzz:**

Number of players: 2

Description: Players place geometry terms cards facedown in a pile and, as they select cards, name the attributes of each figure within 1 minute.

- Player A flips the first card and says as many attributes as possible within 30 seconds.
- Player B says, "Buzz," when or if Player A states an incorrect attribute or time is up.
- Player B explains why the attribute is incorrect (if applicable) and can then start listing attributes about the figure for 30 seconds.
- Players score a point for each correct attribute.
- Play continues until students have exhausted the figure's attributes. A new card is selected, and play continues. The player with the most points at the end of the game wins.

**Concentration:**

Number of players: 2–6

Description: Players persevere to match term cards with their definition and description cards.

- Create two identical arrays side by side: one of term cards and one of definition and description cards.
- Players take turns flipping over pairs of cards to find a match. A match is a vocabulary term and its definition or description card. Cards keep their precise location in the array if not matched. Remaining cards are not reconfigured into a new array.
- After all cards are matched, the player with the most pairs is the winner.

**Three Questions to Guess My Term!**

Number of players: 2–4

Description: A player selects and secretly views a term card. Other players take turns asking yes or no questions about the term.

- Players can keep track of what they know about the term on paper.
- Only yes or no questions are allowed. ("What kind of angles do you have?" is not allowed.)
- A final guess must be made after 3 questions but may be made sooner. Once a player says, "This is my guess," no more questions may be asked by that player.
- If the term is guessed correctly after 1 or 2 questions, 2 points are earned. If all 3 questions are used, only 1 point is earned.
- If no player guesses correctly, the card holder receives the point.
- The game continues as the player to the card holder's left selects a new card and questioning begins again.
- The game ends when a player reaches a predetermined score.

**Bingo:**

Number of players: at least 4–whole class

Description: Players match definitions to terms to be the first to fill a row, column, or diagonal.

- Players write a geometry term in each box of the math bingo card. Each term should be used only once. The box that says *Math Bingo!* is a free space.
- Players place the filled-in math bingo template in their personal white boards.
- One person is the caller and reads the definition from a geometry definition card.
- Players cross off or cover the term that matches the definition.
- Bingo!" is called when 5 vocabulary terms in a row are crossed off diagonally, vertically, or horizontally. The free space counts as 1 box toward the needed 5 vocabulary terms.
- The first player to have 5 in a row reads each crossed-off word, states the definition, and gives a description or an example of each word. If all words are reasonably explained as determined by the caller, the player is declared the winner.

game directions

| | | | | |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | Math BINGO | | |
| | | | | |
| | | | | |

| | | | | |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | Math BINGO | | |
| | | | | |
| | | | | |

bingo card

Step 1 Draw $\overline{AB}$ 3 inches long centered near the bottom of a blank piece of paper.

Step 2 Draw $\overline{AC}$ 3 inches long, such that $\angle BAC$ measures 108°.

Step 3 Draw $\overline{CD}$ 3 inches long, such that $\angle ACD$ measures 108°.

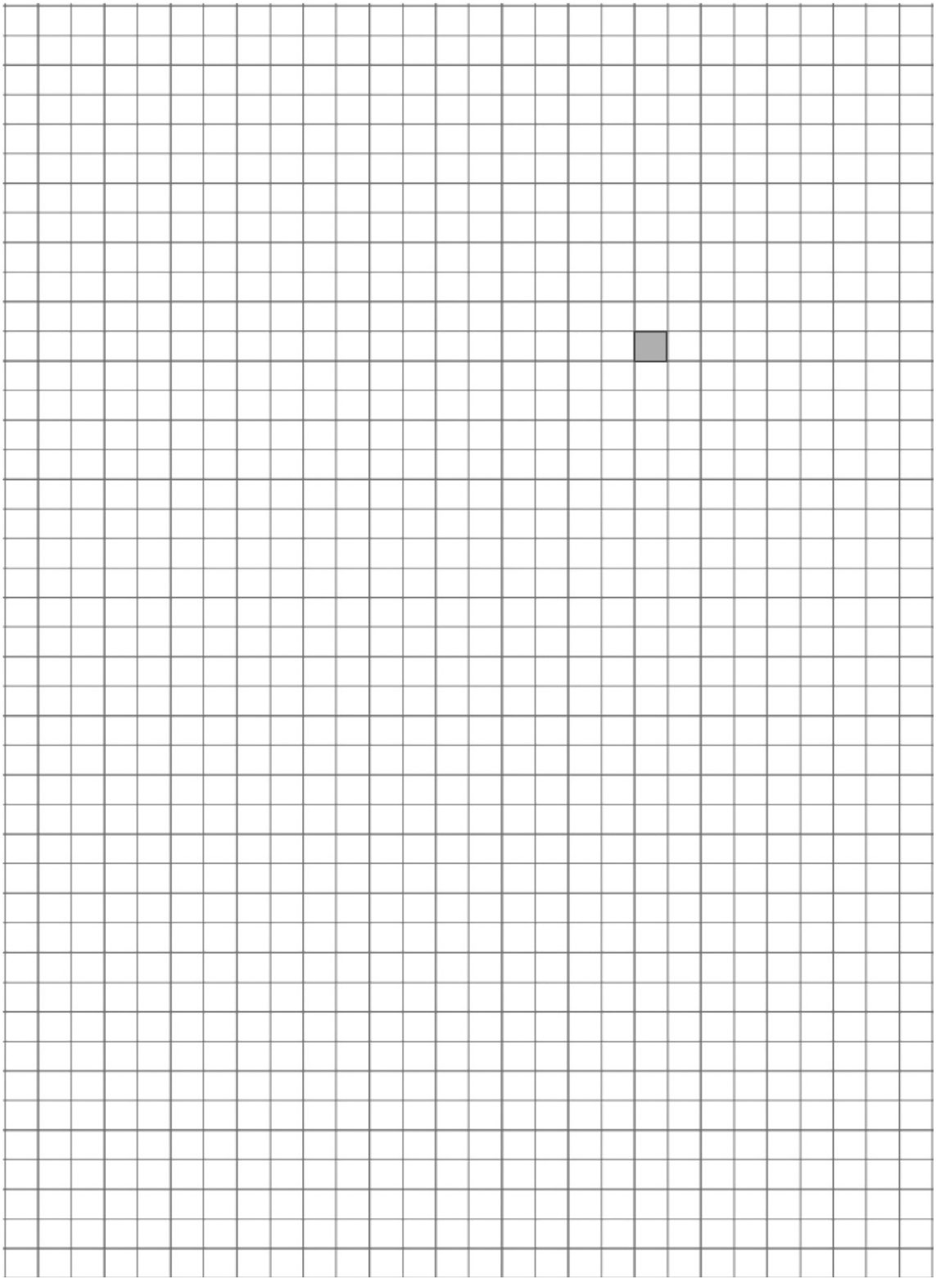
Step 4 Draw $\overline{DE}$ 3 inches long, such that $\angle CDE$ measures 108°.

Step 5 Draw $\overline{EB}$.

Step 6 Measure $\overline{EB}$.

**Read** **Draw** **Write**

Name _____ Date _____



Write the Fibonacci sequence. Analyze which numbers are even. Is there a pattern to the even numbers? Why? Think about the spiral of squares that you made yesterday.

**Read** **Draw** **Write**

Name _____ Date _____

1. Ashley decides to save money, but she wants to build it up over a year. She starts with $1.00 and adds 1 more dollar each week. Complete the table to show how much she will have saved after a year.

| Week | Add | Total |
|---|---|---|
| 1 | $1.00 | $1.00 |
| 2 | $2.00 | $3.00 |
| 3 | $3.00 | $6.00 |
| 4 | $4.00 | $10.00 |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
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| 22 | | |
| 23 | | |
| 24 | | |
| 25 | | |
| 26 | | |

| Week | Add | Total |
|---|---|---|
| 27 | | |
| 28 | | |
| 29 | | |
| 30 | | |
| 31 | | |
| 32 | | |
| 33 | | |
| 34 | | |
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| 36 | | |
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2. Carly wants to save money, too, but she has to start with the smaller denomination of quarters. Complete the second chart to show how much she will have saved by the end of the year if she adds a quarter more each week. Try it yourself, if you can and want to!

| Week | Add | Total |
|---|---|---|
| 1 | $2.25 | $0.25 |
| 2 | $0.50 | $0.75 |
| 3 | $0.75 | $1.50 |
| 4 | $1.00 | $2.50 |
| 5 | | |
| 6 | | |
| 7 | | |
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| 24 | | |
| 25 | | |
| 26 | | |

| Week | Add | Total |
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| 27 | | |
| 28 | | |
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| 30 | | |
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3. David decides he wants to save even more money than Ashley did. He does so by adding the next Fibonacci number instead of adding $1.00 each week. Use your calculator to fill in the chart and find out how much money he will have saved by the end of the year. Is this realistic for most people? Explain your answer.

| Week | Add | Total |
|---|---|---|
| 1 | $1 | $1 |
| 2 | $1 | $2 |
| 3 | $2 | $4 |
| 4 | $3 | $7 |
| 5 | $5 | $12 |
| 6 | $8 | $20 |
| 7 | | |
| 8 | | |
| 9 | | |
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| 22 | | |
| 23 | | |
| 24 | | |
| 25 | | |
| 26 | | |

| Week | Add | Total |
|---|---|---|
| 27 | | |
| 28 | | |
| 29 | | |
| 30 | | |
| 31 | | |
| 32 | | |
| 33 | | |
| 34 | | |
| 35 | | |
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| 51 | | |
| 52 | | |

Name _____ Date _____

Record the dimensions of your boxes and lid below. Explain your reasoning for the dimensions you chose for Box 2 and the lid.

**BOX 1** (Can hold Box 2 inside.)

The dimensions of Box 1 are _____ × _____ × _____.

Its volume is _____.

**BOX 2** (Fits inside of Box 1.)

The dimensions of Box 2 are _____ × _____ × _____.

Reasoning:

**LID** (Fits snugly over Box 1 to protect the contents.)

The dimensions of the lid are _____ × _____ × _____.

Reasoning:

1. What steps did you take to determine the dimensions of the lid?

2. Find the volume of Box 2. Then, find the difference in the volumes of Boxes 1 and 2.

3. Imagine Box 3 is created such that each dimension is 1 cm less than that of Box 2. What would the volume of Box 3 be?

Steven is a _____ who had \$280. He spent $\frac{1}{4}$ of his money on a _____ and $\frac{5}{6}$ of the remainder on a _____. How much money did he spend altogether?

**Read** **Draw** **Write**

Name _____ Date _____

I reviewed _____'s work.

Use the chart below to evaluate your friend's two boxes and lid. Measure and record the dimensions, and calculate the box volumes. Then, assess suitability, and suggest improvements in the adjacent columns.

| Dimensions and Volume | Is the Box or Lid Suitable? Explain. | Suggestions for Improvement |
|---|---|---|
| **BOX 1** dimensions:<br><br>Total volume: | | |
| **BOX 2** dimensions:<br><br>Total volume: | | |
| **LID** dimensions: | | |