



# MATHEMATICS WINTER STUDENT ENRICHMENT PACKET



**Detroit Public Schools Community District**  
**Department of Curriculum and Instruction**  
**Office of Mathematics**



Adapted from Prince George's County Public Schools



## **Directions and Notes for Students and Parents Grades 1 - 5**

1. Plan to work for about one hour to complete the entire packet.
2. Find a quiet place to complete your work independently.
3. Read each problem carefully before selecting or writing your answer.
4. Check your work.

Thank you for helping your child succeed!

**1-2.** Help Jill figure out her score in some games she played with friends. Her score is always in between the lowest score and the highest score shown. Use only the cards below to determine her scores. \*Remember you can only use each card once. **(4.NF.2)**

Lowest Score	Jill's Score	Highest Score
$4\frac{1}{2}$	a.	5
$3\frac{1}{3}$	b.	$3\frac{2}{3}$
$3\frac{1}{2}$	c.	$3\frac{3}{4}$
$4\frac{2}{3}$	d.	5
$2\frac{3}{4}$	e.	$3\frac{1}{8}$
?	f.	?

Jill's scores

3	$4\frac{3}{4}$	$4\frac{5}{6}$	$3\frac{2}{3}$	$3\frac{1}{2}$	$4\frac{2}{3}$
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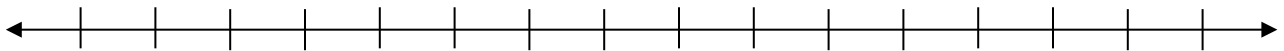
**\*Bonus:** Which score did you not give to Jill? What could be the lowest and highest score for that number? Explain why your answer is correct.

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- Place Jill's highest score and lowest score from above on the number line below. Make sure to label your number line.



Tell how you determined where to place the numbers.

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### 3. Who Am I? (4.NF.1 and 4.NF.2)

**Puzzle 1**

**Who am I?**

$$\frac{1}{4} \quad \frac{1}{2} \quad \frac{3}{4} \quad \frac{4}{4} \quad \frac{5}{4}$$

- I am more than one half.
- My denominator is larger than my numerator.
- I cannot be written with a denominator of 5.
- I am \_\_\_\_\_.

**Puzzle 2**

**Who am I?**

$$\frac{2}{3} \quad \frac{3}{4} \quad \frac{2}{5} \quad \frac{7}{10} \quad \frac{6}{8}$$

- My numerator is an even number.
- I am greater than one half.
- I am written in simplest form.
- I am \_\_\_\_\_.

**Puzzle 3**

**Who am I?**

$$\frac{2}{8} \quad \frac{4}{6} \quad \frac{9}{12} \quad \frac{3}{5} \quad \frac{5}{12}$$

- I am greater than  $\frac{1}{2}$ .
- I cannot be simplified.
- I am closer to 1 than one half.
- I am \_\_\_\_\_.

4. The **area** of Ken's rectangular yard is 480 square feet. The yard is 24 feet wide. In order to fence in the garden completely on all four sides, how many feet of fencing would Ken need to buy? Explain how you got your answer in the space below. **(4.MD.3)**

5. Your teacher wants to buy a new house. She wants a three-bedroom home with a square footage between 1,300 and 1,500 feet combined in the bedrooms. Design three rectangular bedrooms whose total area is between 1,300 and 1,500 square feet. Include a diagram with the dimensions written.

**(4.MD.3)**



6. The Wheel Shop sells other kinds of vehicles. There are bicycles and go-carts in a different room of the shop. Each bicycle has only one seat and each go-cart has only one seat. There are a total of 21 seats and 54 wheels in that room.



How many are bicycles and how many are go-carts? Explain how you found your answer. **(4.OA.3)**

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7. Two students were walking to school one day when they saw two teachers each walking with two dogs. On each of the dogs' two ears, there were two fleas. Each flea called two more fleas to join them. How many fleas were there in all? Explain how you found your answer. **(4.OA.3)**

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8. A touchdown is worth 6 points. During the regular 2013 NFL season, Joe Flacco scored 19 touchdowns. In 2012, he scored 25 touchdowns and in 2011 he scored 20 touchdowns. How many points did Joe Flacco score for the Ravens in the three years? Explain how you found your answer. **(4.OA.3)**

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**\*\*Bonus\*\*** Create your own word problem and solution about an experience during the Winter Break. Do not forget to include strategies for the solution.