Incoming 7th Grade Math Summer Packet

This summer, you will complete two types of math tasks to keep your math skills strong:

1. ## <u>iXL Quizzes</u>:
   Complete the iXL quizzes. You **must submit your work** to receive credit.

2. ## <u>Create a Math Game:</u>
   Design a game based on a math skill we covered this year. Your game should fit inside a gallon-sized Ziploc bag and include:
   - Game directions
   - Game pieces
   - An answer key

Your game can be inspired by an existing board game or be a brand new idea. It should take about 10 to 15 minutes to play. If you prefer, you may create a digital game (such as Blooket or Jeopardy). If you create a digital game you will be required to attach the link in Google Classroom. All games must be your original work. You may use IXL and Envision Books or their online platforms for question ideas.

Topics to Consider:
- Rates & Unit Rates
- Integers
- Fractions and Decimals (adding, subtracting, multiplying, and dividing)
- Expressions
- Solving One-Step Equations
- Writing Inequalities
- Graphing on the Coordinate Plane
- Percents
- Mean, Median & Mode

Suggested Pacing Guide

Use the following guide as a suggestion of when to complete quizzes and the games task. in July and August. This will help you keep track of what work needs to be completed and keep your math skills strong throughout the summer!

Week of:	Tasks	Completed ☑
June 29th	iXL Summer Quiz 1- Fractions and Decimals	
	Choose type of game you will create	
July 6th	iXL Summer Quiz 2- Integers	
	Choose topics for game	
July 13th	iXL Summer Quiz 3- Coordinate Plane	
	Create Board and Pieces or setup online platform	
July 20th	iXL Summer Quiz 4- Equations	
	Create 10 Questions	
July 27th	iXL Summer Quiz 5- Ratios and Rates	
	Create 10 Questions	
August 3rd	iXL Summer Quiz 6- Perimeter and Area	
	Create Answer Key	
August 10th	iXL Summer Quiz 7- Percents	
	Finish Game Task	
August 17th	iXL Summer Quiz 8- Statistics	
	Finish Game Task	

All quizzes must be completed and turned in with your work on the first day of school, September 2nd!

Paquete de Verano de Matemáticas para estudiantes de 7°

Este verano, completarán dos tipos de tareas de matemáticas para mantener fortalecidas sus habilidades matemáticas:

1. ## <u>Cuestionarios iXL</u>:
   Completa los cuestionarios de iXL. **Debes enviar tu trabajo para** recibir crédito.

2. ## <u>Crea un Juego de Matemáticas:</u>
   Diseña un juego basado en una habilidad matemática que vimos este año. Tu juego debe caber en una bolsa Ziploc de un galón e incluir:
   - Instrucciones del juego
   - Piezas de juego
   - Una clave de respuestas

Tu juego puede estar inspirado en un juego de mesa existente o ser una idea completamente nueva. Debería tomarse entre 10 y 15 minutos jugarlo. Si lo prefieres, puedes crear un juego digital (como Blooket o Jeopardy). Si creas un juego digital, deberás adjuntar el enlace en Google Classroom. Todos los juegos deben ser de tu autoría. Puedes usar IXL y Envision Books o sus plataformas en línea para obtener ideas para las preguntas.

Temas a considerar:
- Tarifas y tarifas unitarias
- Números enteros
- Fracciones y Decimales (suma, resta, multiplicación y división)
- Expresiones
- Resolver ecuaciones de Un Paso
- Escritura de Desigualdades
- Graficar en el Plano de Coordenadas
- Porcentajes
- Media, Mediana y Modo

Guía de Ritmo Sugerida

Usa la siguiente guía como sugerencia para saber cuándo completar los exámenes y la tarea de juegos en Julio y Agosto. Esto te ayudará a llevar un registro del trabajo pendiente y a mantener tus habilidades matemáticas fortalecidas durante el verano!

Semana de:	Tareas	Terminado ☑
Junio 29	Cuestionario de verano iXL 1- Fracciones y Decimales	
	Elige el tipo de juego que crearás	
Julio 6	Cuestionario de verano iXL 2- Números Enteros	
	Elige temas para el juego	
Julio 13	Cuestionario de verano iXL 3- Plano de Coordenadas	
	Crea un tablero y piezas o configura una plataforma en línea	
Julio 20	Cuestionario de verano iXL 4: Ecuaciones	
	Crea 10 preguntas	
Julio 27	Cuestionario de verano iXL 5: Razones y tasas	
	Crea 10 preguntas	
Agosto 3	Prueba de verano iXL 6: perímetro y área	
	Crear clave de respuestas	
Agosto 10	Cuestionario de verano iXL 7- Porcentajes	
	Terminar la Tarea del Juego	
Agosto 17	Cuestionario de verano iXL 8: Estadísticas	
	Terminar la Tarea del Juego	

¡Todos los exámenes deben completarse y entregarse con su trabajo el primer día de clases, 2 Septiembre 2 !

Name: _____

6th Grade Summer Quiz 1- Fractions & Decimals

1.   Subtract. Write your answer as a fraction or as a whole or mixed number.

$$7\frac{2}{5} - \frac{1}{2} = \boxed{}$$

2.   Subtract. Write your answer as a fraction or as a whole or mixed number.

$$8\frac{2}{3} - 4\frac{3}{4} = \boxed{}$$

3.   Multiply.

$$\frac{1}{10} \times \frac{1}{8} = \boxed{}$$

4.   Add.

$$\frac{2}{6} + \frac{5}{6} = \boxed{}$$

5. An athlete drank 9 1/2 bottles of sports drink in the first half of a match and another 1 bottle in the second half. How much did he drink in all?

Write your answer as a fraction or as a whole or mixed number.

[   ] bottles

6. A meteorologist recorded the rainfall in Wildgrove in two consecutive months. In the first month, there were 2 3/5 inches of rain. In the second month, there were 2 1/2 inches of rain. What was the total amount of rainfall during the two months?

Write your answer as a fraction or as a whole or mixed number.

[   ] inches

7. Multiply:

$$33.9 \times 0.4 = \boxed{}$$

8. Multiply:

$$8.2 \times 5.8 = \boxed{}$$

9. Rose participates in a charity relay walk. There are 5 members on her team, including Rose. Each person walks around a park trail that is 2.7 miles long. How many total miles does Rose's team walk?

[   ] miles

10. Keith is making a spice rack for his mom in woodworking class. He starts with a board that is 31.25 inches long. Then, he cuts it into 5 equal pieces for the shelves. How long will each shelf be?

_____ inches

Name: _____

6th Grade Summer Quiz 2- Integers

1. Eve is flying her new kite at the park. A gust of wind causes the kite to drop 5 meters.

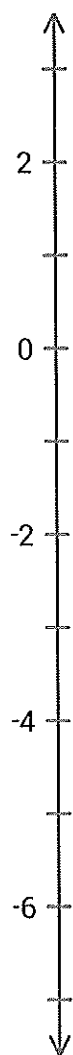   What integer represents the change in the kite's height?

    [   ] meters

2. When Philip won $20 for correctly guessing the number of pennies in a jar at the school carnival, he put the money in his wallet.

    What integer represents the change in the amount of money in Philip's wallet?

    [   ] dollars

3. Graph 1, −1, and −5 on the number line.

4. Graph 4, −4, and 10 on the number line.

5. What number is the opposite of 0?

6. What is |−39|?

[ ]

7. What is the absolute value of 37?

   [ ]

8. Compare the numbers. Pick the correct sign.

   −65 ? −69

   | > | < | = |

9. Put 8, −45, 45, and −8 in order from least to greatest.

   | 8 | −45 | 45 | −8 |

10. Put 26, −50, 47, and −9 in order from least to greatest.

   | 26 | −50 | 47 | −9 |

Name: _____

6th Grade Summer Quiz 3- Coordinate Plane

1. Which point has coordinates (−3, −4)?
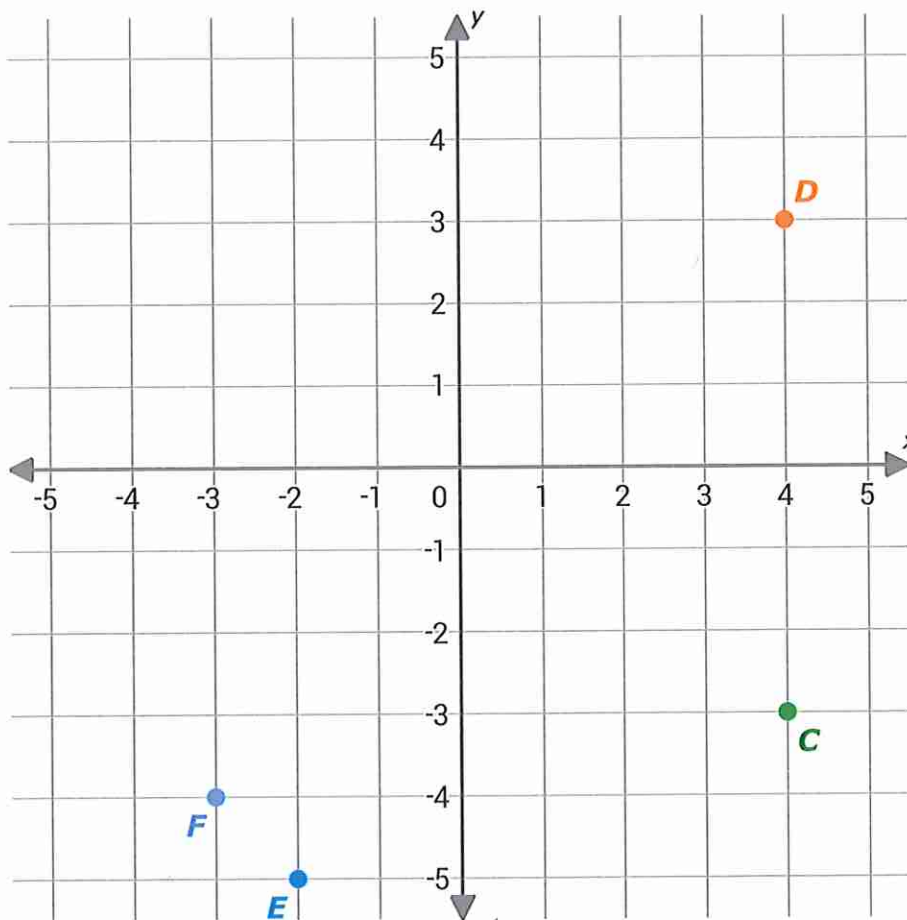
C	D	E	F

2. Which point has coordinates $\left(4, 2\frac{1}{2}\right)$?
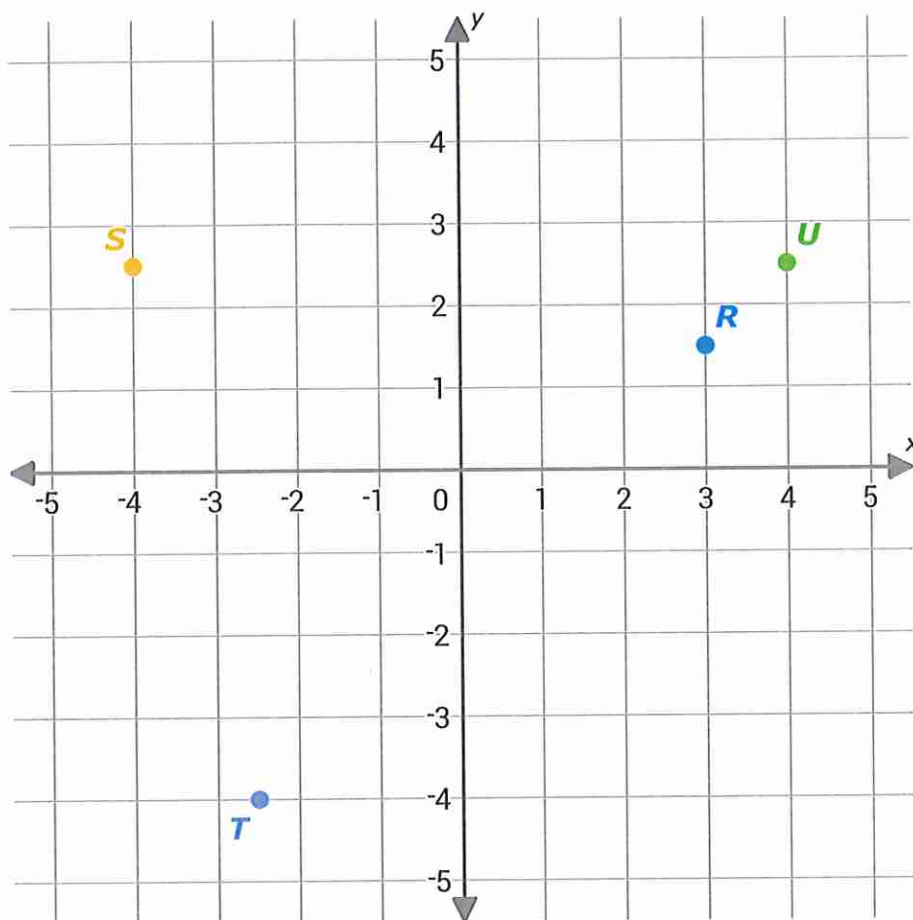
| R | S | T | U |

3. Which point has coordinates (−2, 2.5)?
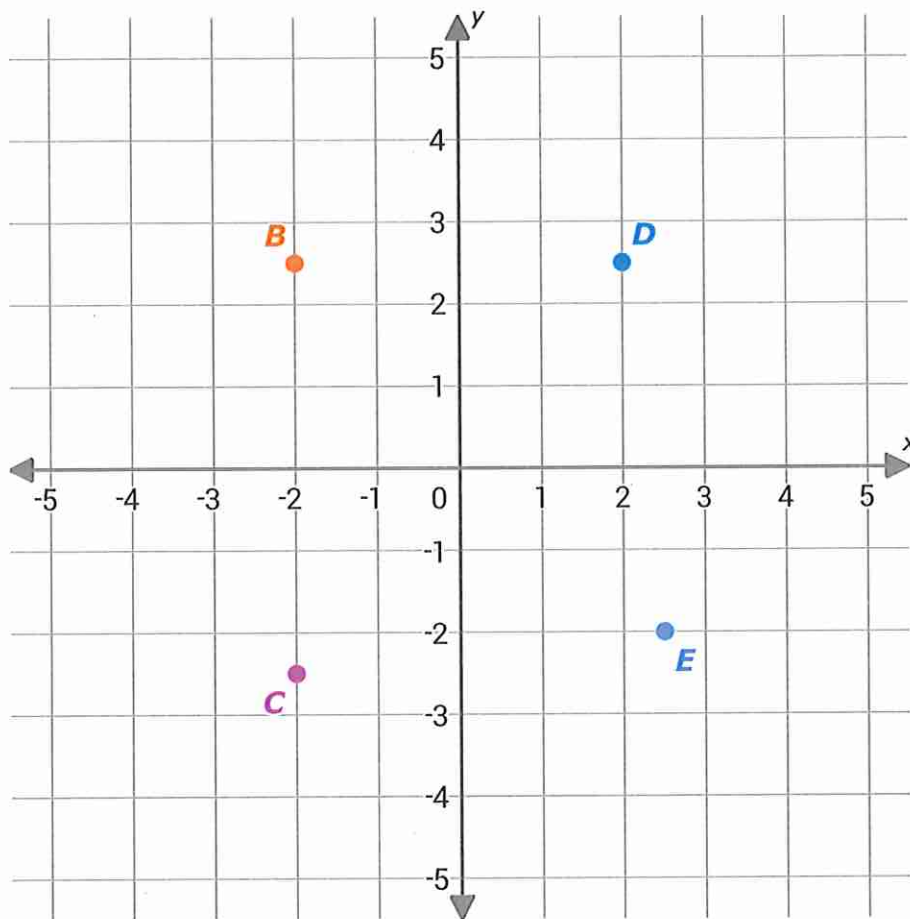
| B | C | D | E |

4. Which quadrant is the point E in?
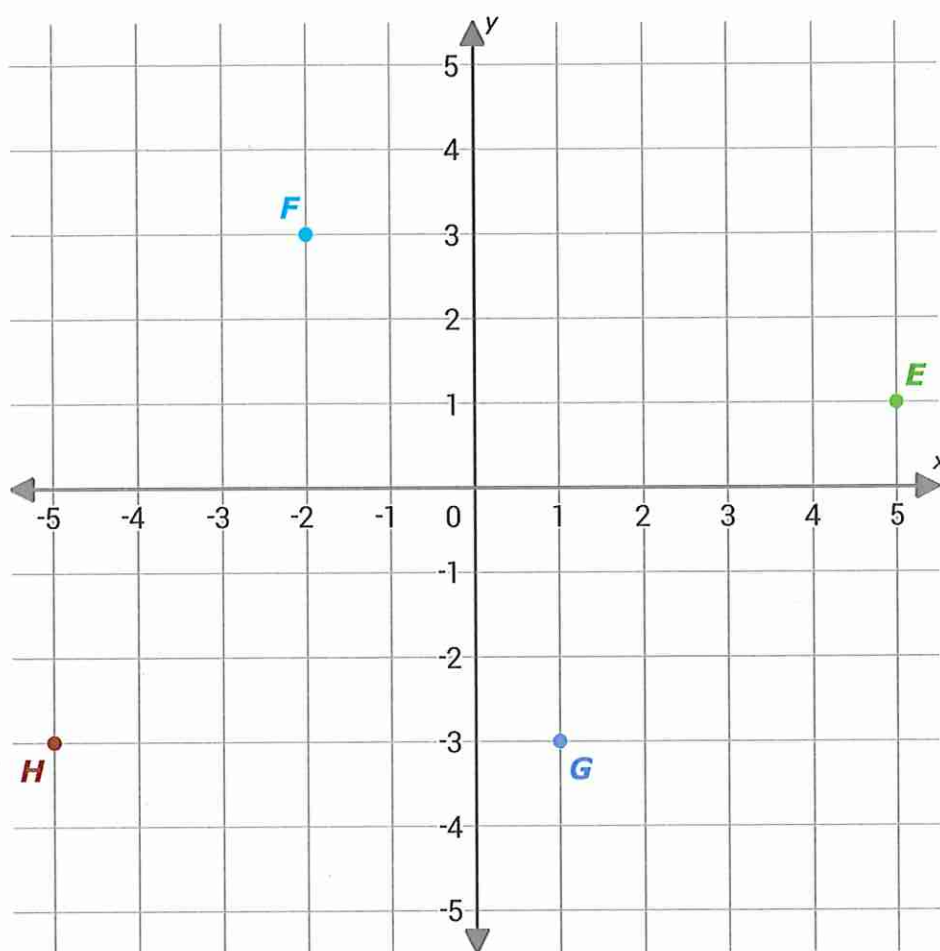
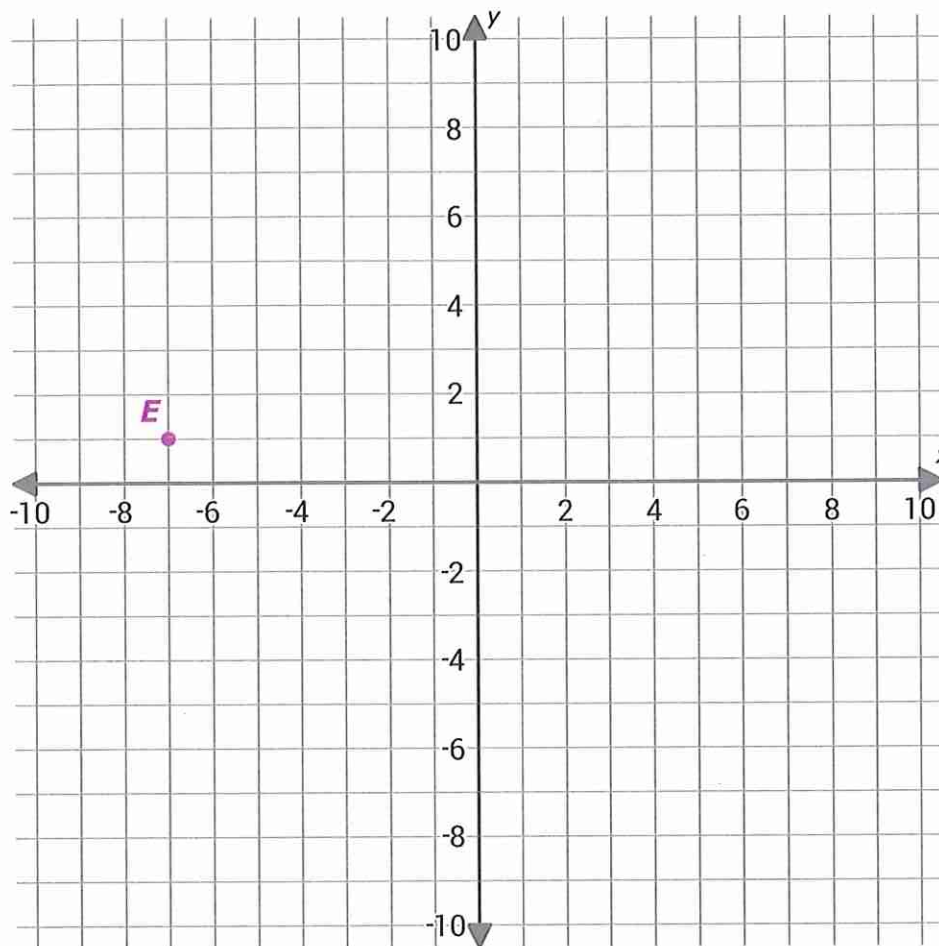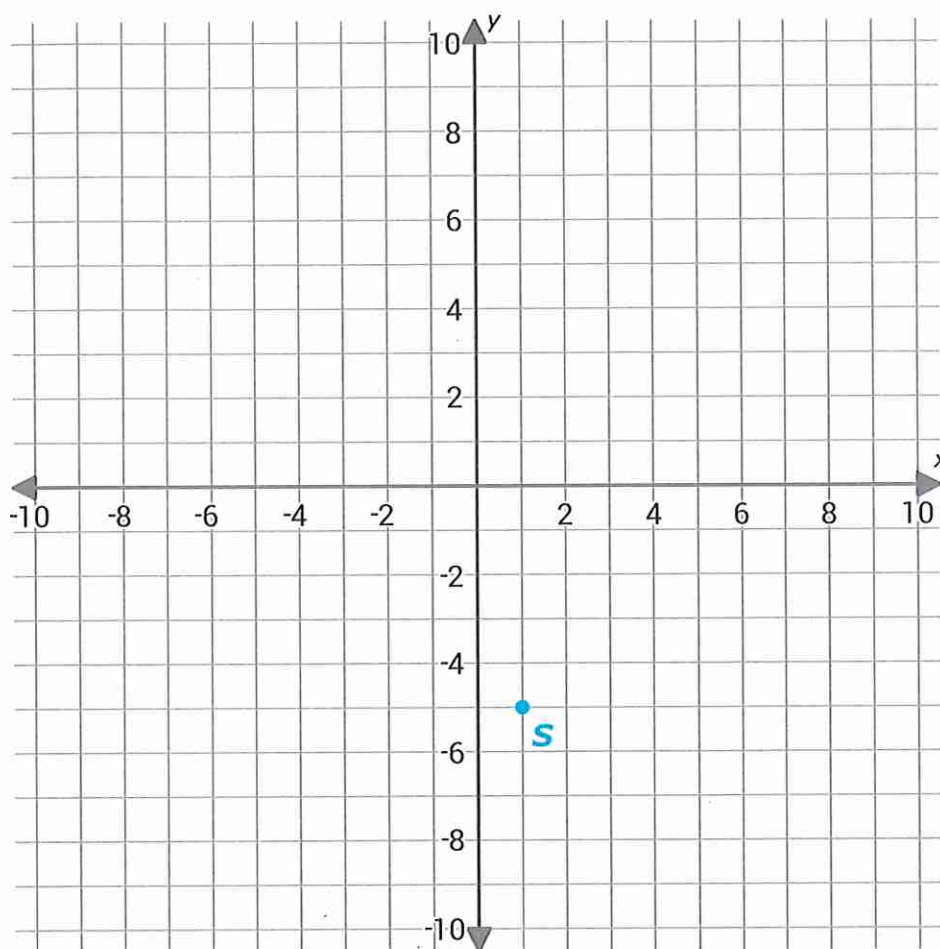| Quadrant I | Quadrant II | Quadrant III | Quadrant IV |

5. Which point is in Quadrant II?
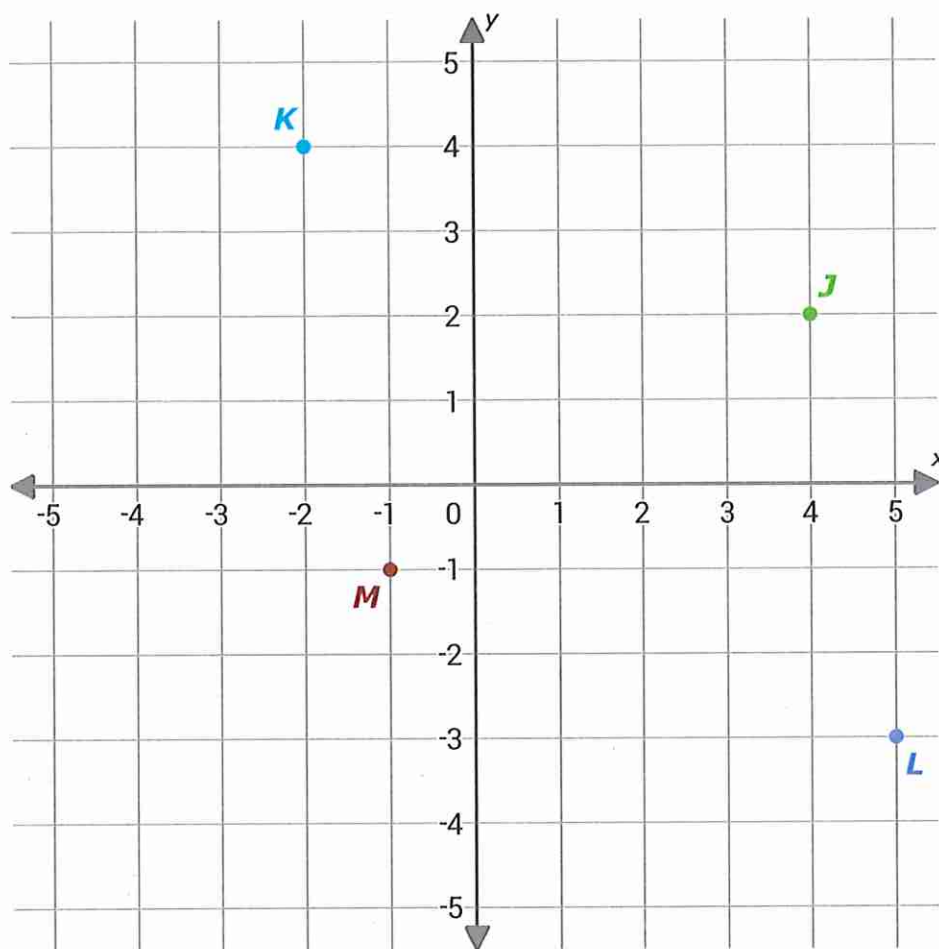
| J | K | L | M |

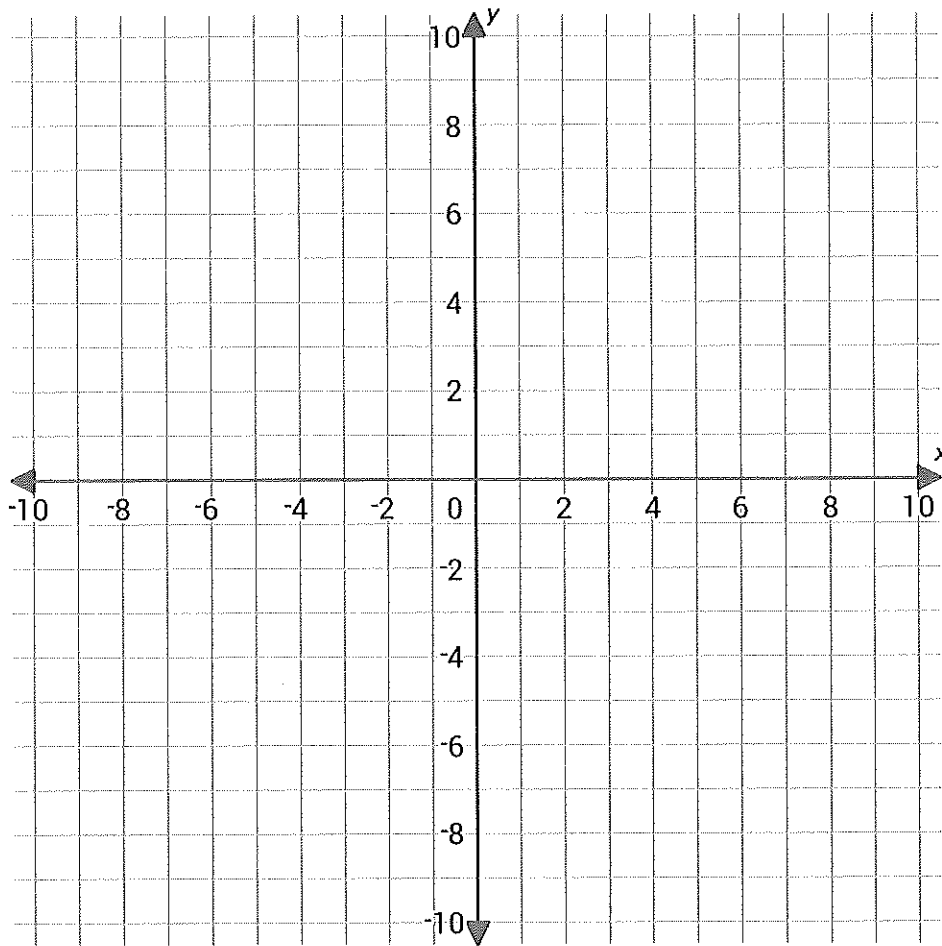6. Graph the image of $E(-7, 1)$ after a reflection over the y-axis.

7. Graph the image of $S(1, -5)$ after a reflection over the y-axis.
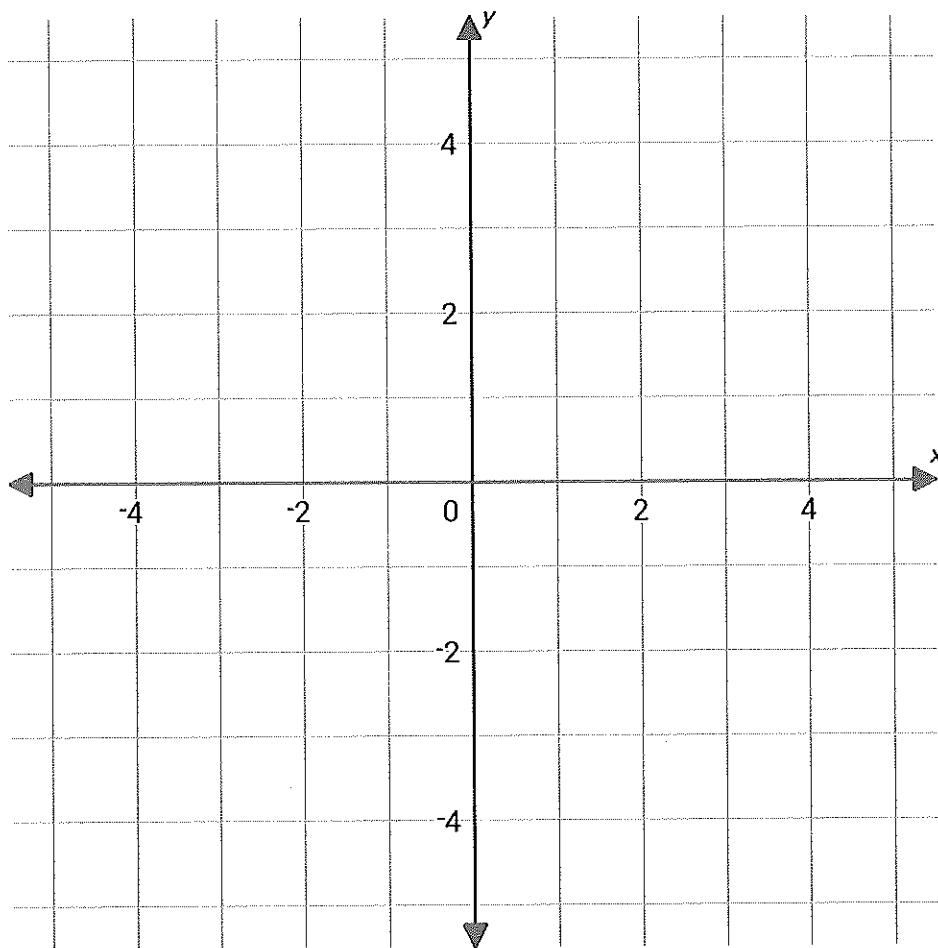
8. Graph the points (7, 1) and (−1, −8) on the coordinate plane.

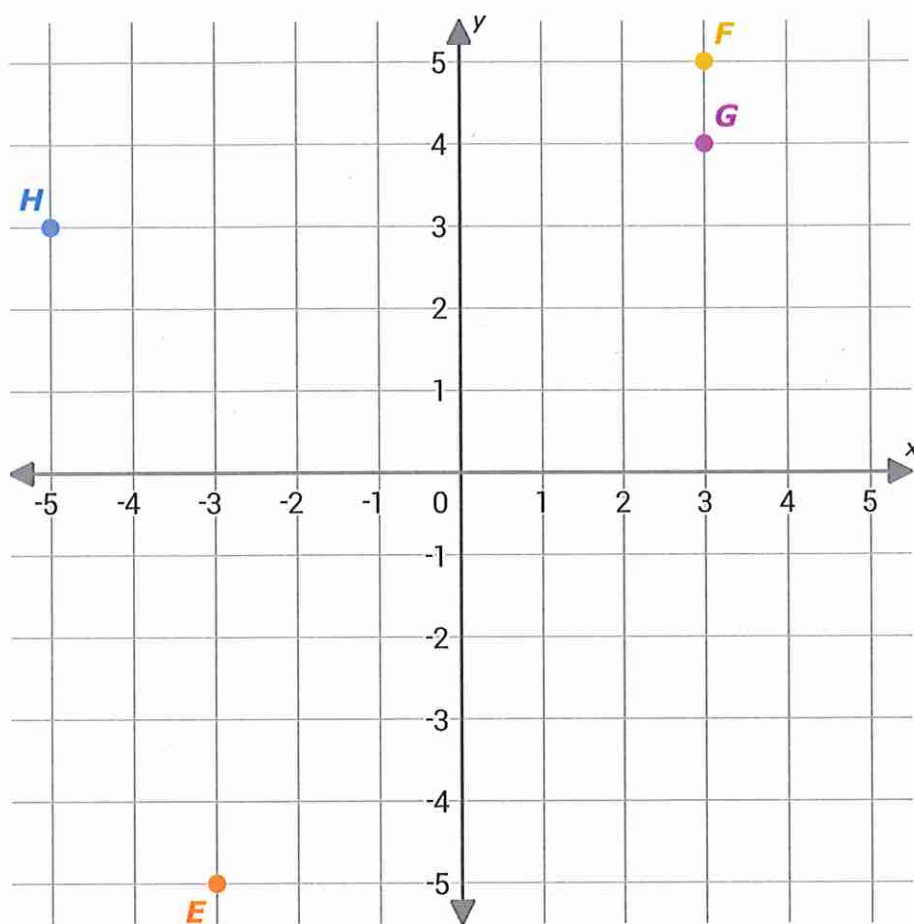*Click to graph a point. Click the point again to delete it.*

9. Graph the points (5, −5), (−1.5, −1.5), and (2, 2.5) on the coordinate plane.

Click to graph a point. Click the point again to delete it.

10. Which point has coordinates (3, 5)?

E	F	G	H

Name: _____

6th Summer Quiz 4- Equations

1. Is $a = 2$ a solution to this equation?

$$8 = 4a$$

yes	no

2. Is $t = 8$ a solution to this equation?

$$7 = \frac{t}{2}$$

yes	no

3. Is $q = 2$ a solution to this equation?

$$7 = 9q$$

yes	no

4. Write the sentence as an equation.

   t fewer than 330 is equal to 317

   Type a slash (/) if you want to use a division sign.

   ┌─────────────────────┐
   │   │
   └─────────────────────┘

5. Which of these are **equations**? Select all that apply.

   ✔ $40 = \dfrac{80}{m}$ ✔ $80 + m - 40$

   ✔ $40m = 80$ ✔ $80 - m = 40$

6. Solve for n.

   $n + 286 = 463$

   $n = $ ┌─────────┐
         └─────────┘

7. Solve for m.

   $m + 326 = 694$

   $m = $ ┌─────────┐
         └─────────┘

8.　Tucker made cranberry granola to bring on his camping trip. After he baked it, Tucker carefully divided the block of granola into 24 equal-sized cubes. Each cube had a volume of 8 cubic inches.

Let v represent the volume of the entire block of granola. Which equation models the problem?

$$8v = 24$$

$$\frac{v}{24} = 8$$

Solve this equation to find the volume of the entire block of granola.

[_____] cubic inches

9.　Solve for n.

$$14n = 980$$

$$n = \boxed{}$$

10.　Solve for y.

$$196 = 7y$$

$$y = \boxed{}$$

Name: _____

6th Grade Summer Quiz 5- Ratios and Rates

1. What is the ratio of stars to hexagons?

Write your answer as a fraction. Use a slash (/) to separate the numerator and denominator.

☐

2. What is the ratio of triangles to squares?

Write your answer as two numbers separated by a colon (for example, 2:3).

☐

3. What is the ratio of total shapes to hexagons?

Write your answer as a fraction. Use a slash (/) to separate the numerator and denominator.

[ ]

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4. Select all ratios equivalent to 8:12.

| ✓ | 6:9 | | ✓ | 10:15 | | ✓ | 1:4 |

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5. Select all ratios equivalent to 18:15.

| ✓ | 36:30 | | ✓ | 6:5 | | ✓ | 11:6 |

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6. Complete the ratio table.

20	3
40	6
60	[ ]
80	12
[ ]	15

7. Once a month, volunteers from the Green Sea Club clean up litter at the beach. Last month, the volunteers picked up 8 pounds of trash in 4 hours. This month, the same group of volunteers will spend 3 hours picking up trash.

If they pick up trash at the same rate, how many pounds of trash should the volunteers pick up this month?

☐ pounds

8. Bobby likes to hike the trails near his house. On Saturday, he spent 4 hours hiking 8 miles. On Sunday, he plans to hike 12 miles.

If he hikes at the same rate, how many hours will he spend hiking on Sunday?

☐ hours

9. Mr. Erickson is grilling hamburgers for his family's dinner. He formed 6 hamburger patties using 2 pounds of meat.

How many pounds of meat did he use per patty?

$\frac{1}{3}$ of a pound of meat per patty

$\frac{1}{2}$ of a pound of meat per patty

2 pounds of meat per patty

3 pounds of meat per patty

10. Last weekend, Marvin went hiking with his family in Prairie Park. They hiked a 12-mile trail, completing it in 6 hours.
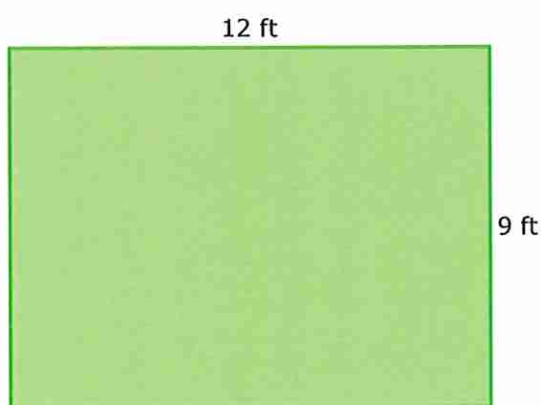
What was the family's hiking pace?
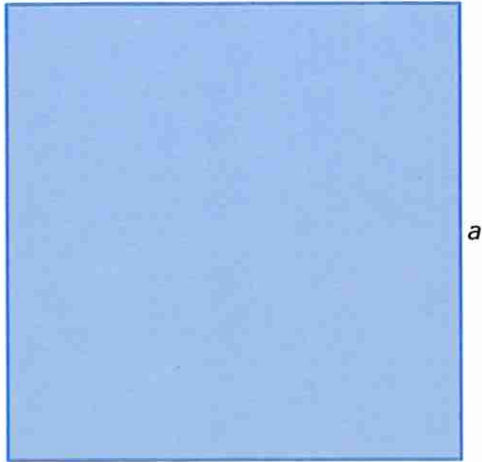
| 0.5 hours per mile | 2 hours per mile |

Name: _____

6th Grade Summer Quiz 6-
Perimeter and Area

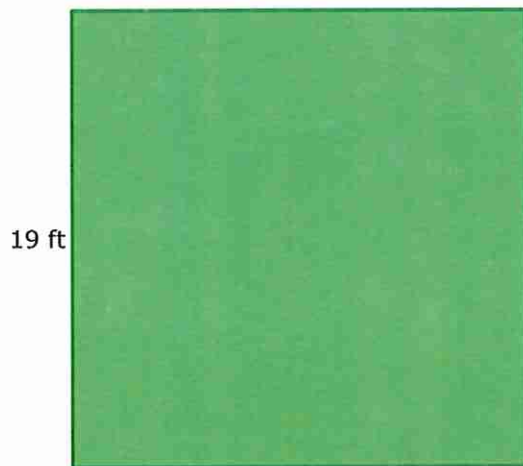1. What is the perimeter of this rectangle?

12 ft

9 ft

[_____] feet

2. Look at this square. Find the value of *a*.

a

Perimeter = 65.2 centimeters

a = [ ] centimeters
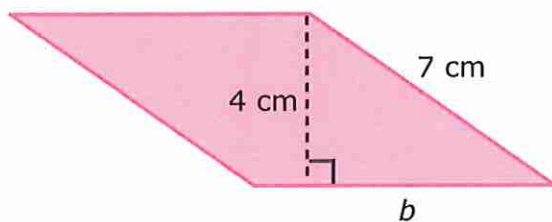
3. What is the area of this square?

19 ft

[ ] square feet

4.   What is the missing length?

15.6 cm

u
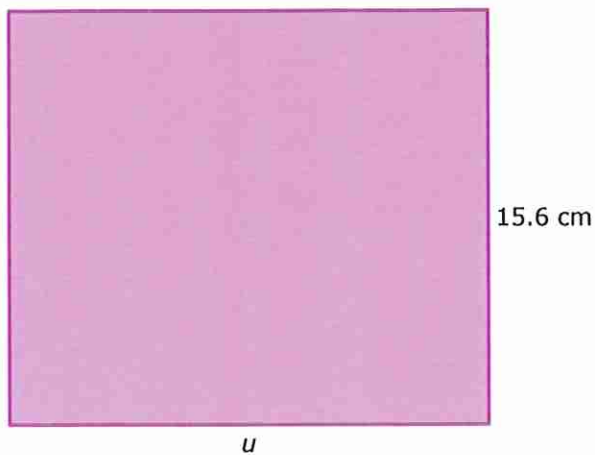
area = 282.36 cm^2

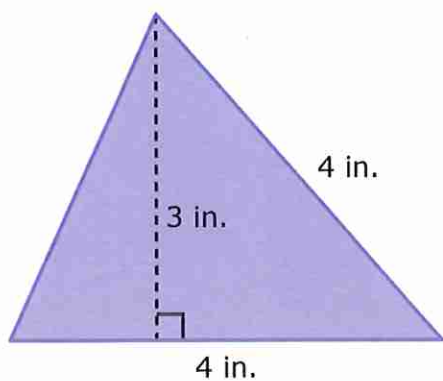*u* = [   ] centimeters

5.   The area of the parallelogram is 28 square centimeters.

7 cm

4 cm

b

What is the parallelogram's base, *b*?

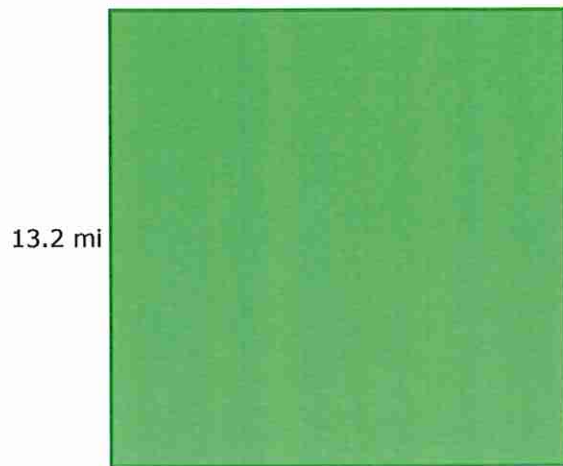*b* = [   ] centimeters

6.   What is the area of the triangle?

4 in.

3 in.

4 in.

[   ] square inches

7.   What is the area?

7.9 mm

13 mm
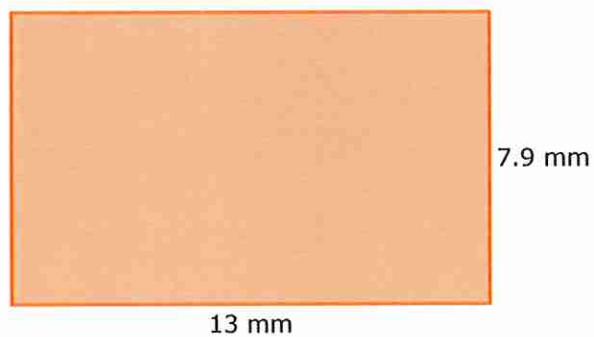
[   ] square millimeters

8.   What is the area of this square?

13.2 mi

[   ] square miles

9.   What is the area of this figure?

9 yd

4 yd

4 yd

13 yd

9 yd

5 yd
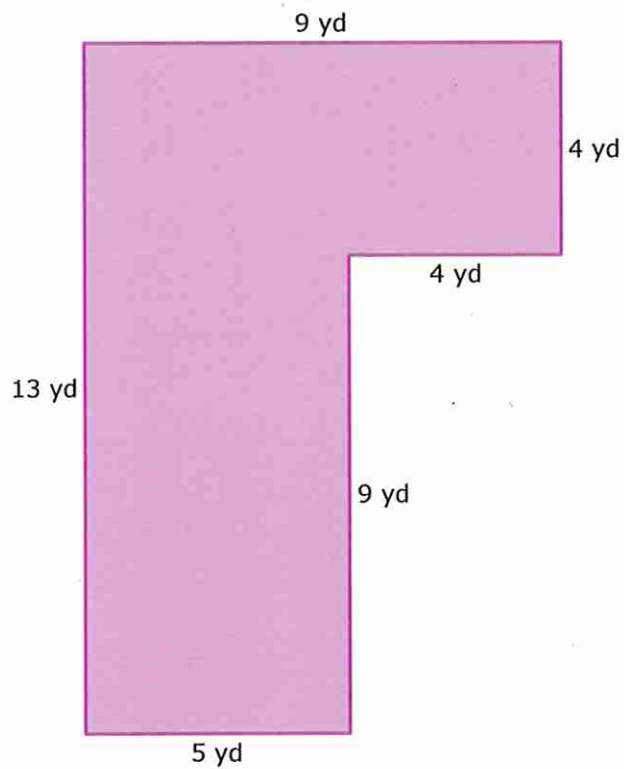
[   ] square yards

10. What is the area of this figure?

18 m

3 m

7 m

3 m

9 m

5 m

3 m

6 m

[ ] square meters

Name: _____
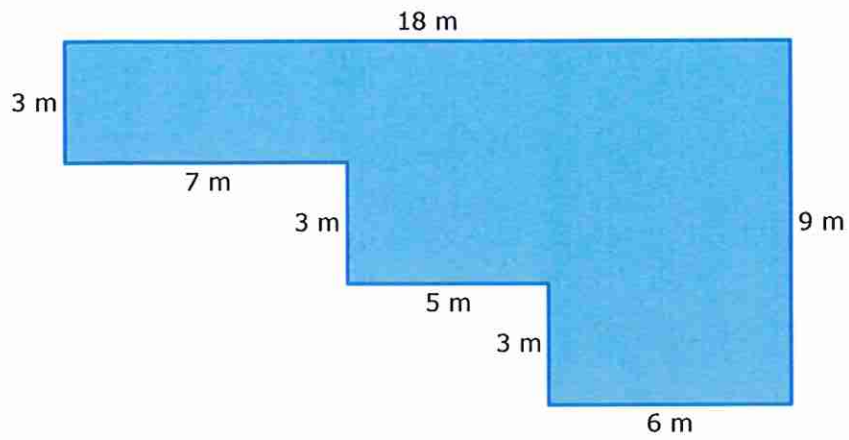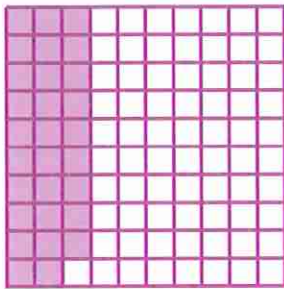
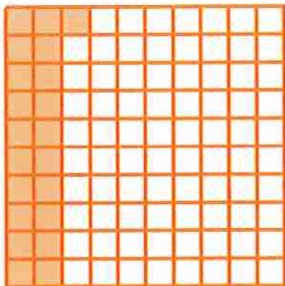# 6th Grade Summer Quiz 7- Percents

1. What percentage of the shape is pink?

Write your answer using a percent sign (%).

[   ]

2. What percentage of the shape is orange?

Write your answer using a percent sign (%).

[   ]

3. How do you write **40.5%** as a decimal?

[   ]

4. How do you write $\frac{1}{100}$ as a percentage?

Write your answer using a percent sign (%).

[   ]

5. How do you write **0.9** as a percentage?

Write your answer using a percent sign (%).

[   ]

6. What is 40% of 75?

[   ]

7. What is 90% of 60?

[   ]

8.   What is 35% of 20?

      ☐

9.   12 is what percent of 50?

      Write your answer using a percent sign (%).

      ☐

10.   14 is what percent of 25?

      Write your answer using a percent sign (%).

      ☐

Name: _____

6th Grade Summer Quiz 8- Statistics

1. Is the following a statistical question?

    How tall are palm trees?

    | yes | no |

2. Is the following a statistical question?

    How many eggs are in a typical cake recipe?

    | yes | no |

3. What is the mode?

    19 10 9 19 10 10 9

4. What is the mean? If the answer is a decimal, round it to the nearest tenth.

    29 38 29 36 37 38 42 40 41 38

5. A bookkeeper is looking over gas receipts from business trips made by employees. For the last 9 purchases, the quantities purchased were:

16 gallons   12 gallons   17 gallons   17 gallons   19 gallons   14 gallons

17 gallons   16 gallons   19 gallons

What was the median quantity of gas purchased?

☐ gallons

6. What is the range?

29   48   39   41   24   38   40   39   39

☐

7. The students in a statistics class are graphing the ages of their 7 parents. Their parents' ages are:

37   40   37   37   42   40   39

What is the mode of the parents' ages?

☐

8. During the Olympics, Destiny took note of the total scores earned by each of 8 gymnasts:

55 points   55 points   58 points   57 points   57 points   54 points   55 points

54 points

What was the mean score? Round your answer to the nearest whole number.

☐ points

9. What is the median?

36   38   38   42   39   39   38   41   39   44

☐

10. Emmet went on 8 hikes. The hikes were:

11 miles   15 miles   10 miles   17 miles   16 miles   18 miles   11 miles   10 miles

What was the range of the lengths of Emmet's hikes?

☐ miles