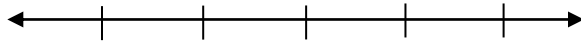
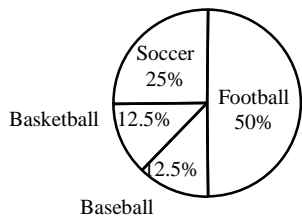
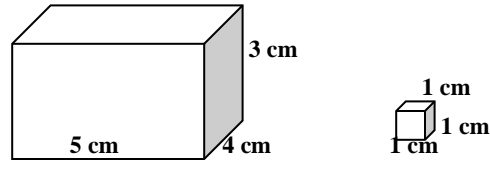
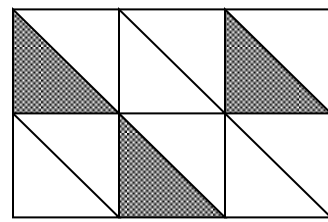


Summer Review for students who have COMPLETED Math 6
 Show your work. Use extra paper if needed and attach it to the packet.

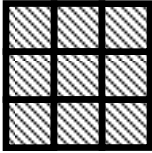

Week #1

Name: _____

<p>1. Write 40% as a simplified fraction and as a decimal number.</p>	<p>2. Graph: $x \leq 3$</p>  <p>Is this problem an example of an expression, an equation, or an inequality?</p>
<p>3. 6 out of 50 states are in the New England region. What ratio of the United States is not in New England?</p>	<p>4. Write each repeated multiplication in exponential form:</p> <p>$3 \times 3 \times 3 \times 3$ _____</p> <p>$5 \times 5 \times 7 \times 7 \times 7$ _____</p> <p>$4 \times n \times n \times n \times m \times m$ _____</p>
<p>5.</p> <p>a) One out of every four students surveyed chose _____ as their favorite sport.</p> <p>b) How many students said football was their favorite sport? _____</p>  <p style="text-align: center;">200 Sixth Graders Were Surveyed</p>	<p>6.</p>  <p>a) Estimate the number of centimeter cubes you will need to fill the large box (rectangular prism). _____</p> <p>b) If you covered the bottom with one layer of centimeter cubes, how many would you need? _____</p> <p>c) How many such layers would be in this box? _____</p>
<p>7. On January 1, Betsy was 5 feet, $4\frac{1}{2}$ inches ($5' 4\frac{1}{2}''$) tall. By the end of March she grew $1\frac{3}{4}$ inches. How tall was she at the end of March?</p>	<p>8. What percent of the figure below is shaded?</p> 
<p>9. Find the value of the expressions below.</p> <p>$2^1 =$ _____ $2^2 =$ _____</p> <p>$2^3 =$ _____ $2^4 =$ _____</p>	<p>10. Create an equation to show an example of the additive identity property.</p>

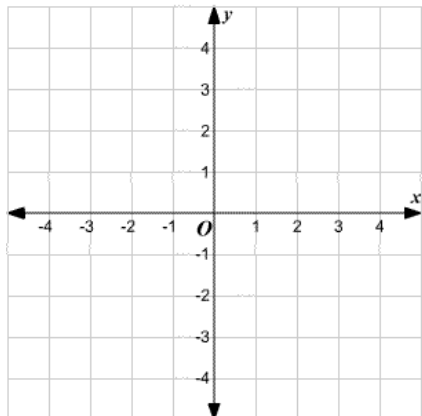
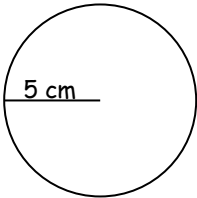

Summer Review for students who have COMPLETED Math 6

Week #2

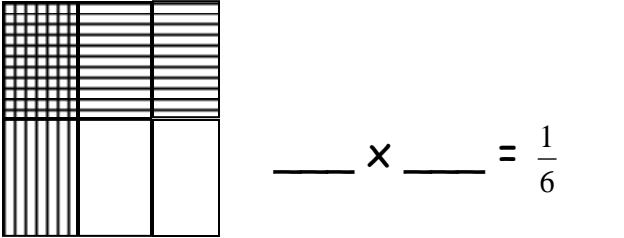
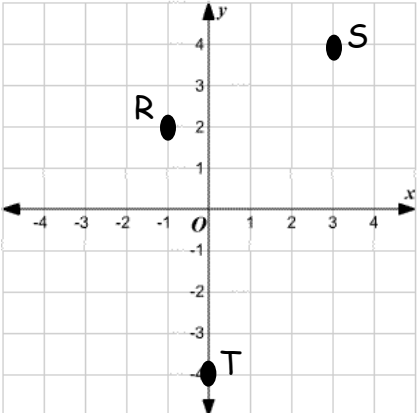


<p>1. If 6 cans of soup cost \$1.50, how much will 9 cans cost?</p>	<p>2. Write an exponential expression to represent the number of small squares in the diagram.</p> 
<p>3. Jim's backpack weighs 3 kg when filled. How many pounds is this, approximately?</p>	<p>4. Consider the inequality statement: $2 \geq x$</p> <p>Write another inequality statement that means the same thing about the values of 2 and x.</p>
<p>5. Is the value of these expressions the same? Explain, and show your work.</p> $4 \cdot 6 - 4$ $4(6 - 4)$	<p>6. Write 80% as a fraction in lowest terms. _____</p> <p>Write 80% as a decimal. _____</p> <p>Show the decimal on the number line.</p>  <p>Draw a picture to show 80%.</p>
<p>7. You toss two coins, each with "heads" on one side and "tails" on the other side. What is the probability that both of them land as "tails?"</p>	<p>8. True or False.</p> <p>All triangles are congruent. _____</p> <p>Explain your answer.</p>
<p>9. Elizabeth had $\frac{3}{4}$ of her birthday candy left. She gave Toni $\frac{1}{2}$ of what she had. How much of her original candy does she have left?</p>	<p>10. Write <u>sometimes</u>, <u>always</u>, or <u>never</u>.</p> <p>a) a negative integer is less than a positive integer. _____</p> <p>b) a negative integer is less than another negative integer. _____</p>

Summer Review for students who have COMPLETED Math 6

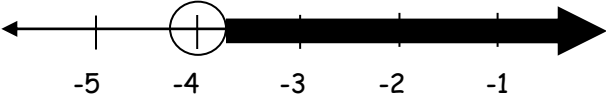
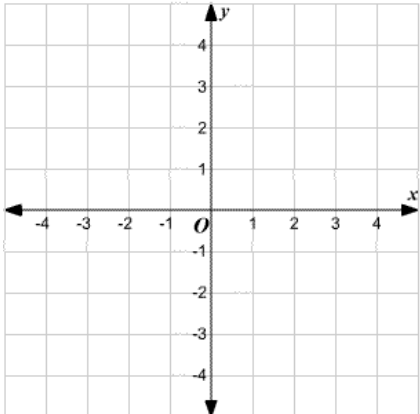
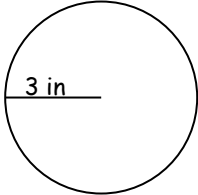
Week #3

<p>1. State at least one way in which the patterns are the same and at least one way in which the patterns are different.</p> <p>a. 15, 20, 25, 30, 35</p> <p>b. 15, 10, 5, 0, -5</p>	<p>2. Graph these ordered pairs: A (1, 3) B (-2, 0) C (3, -4)</p> 
<p>3. Use the formula $A = \pi r^2$ and find the area of the circle. $\pi = 3.14$</p> 	<p>4. Use the multiplicative property of zero to complete the statement about the variable n:</p> <p>$n \times 0 = \underline{\hspace{2cm}}$</p>
<p>5. Circle the smallest integer. Draw a number line showing all four numbers to prove your answer.</p> <p>a) 0 b) -5 c) 5 d) -1</p>	<p>6. A jogger runs completely around the outside of a football field. If the field is a rectangle 360 feet long and 160 feet wide, how far will the jogger run after one time around? Show how you solved the problem.</p>
<p>7. Simplify your answer. John's room is $5 \frac{1}{2}$ yards long and $4 \frac{2}{3}$ yards wide. What is the area of his room?</p>	<p>8. Graph: $x > -2$</p> 
<p>9. Compare. Use $>$, $<$, or $=$.</p> <p>$\frac{3}{4}$ ○ $\frac{4}{5}$</p> <p>Which fraction is larger? $\underline{\hspace{2cm}}$</p>	<p>10. The dimensions of a cereal box are 18"x3"x10" in. What is the volume of the box?</p>

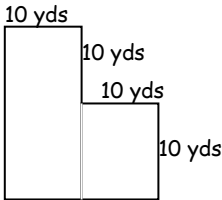
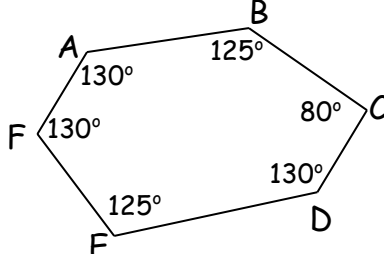
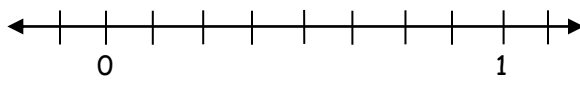
Week #4

<p>1. Lina is making trail mix for a hiking trip. She has $2\frac{1}{2}$ cups of peanuts, $3\frac{1}{4}$ cups of raisins, and $2\frac{2}{3}$ cups of banana chips. How many cups of mix can she make?</p>	<p>2. How do you know that 50 is not a perfect square?</p>
<p>3. Create a multiplication problem whose product is $\frac{1}{6}$, indicated by the double-shaded part of the square below.</p> 	<p>4. Write the coordinates of the points shown:</p> 
<p>5. Circle the numbers that are the same as 50%.</p> <p>$\frac{1}{2}$ 5% 0.5 5 $\frac{5}{10}$.50</p>	<p>6. This is 25% of a certain square, ABCD.</p>  <p>Draw 100% of square ABCD.</p>
<p>7. Abdi's bowling scores for June were 117, 98, 104, 121, 105, 104, 120 and 111. What is the mean of this data? _____</p> <p>Which measure(s) of center would not be helpful to describe this data? Explain.</p>	<p>8. There are 25 paper plates in a package. How many packages are needed if 160 students are to attend a picnic.</p>
<p>9. <u>Logical thinking puzzle:</u> After dinner and dessert, the five friends left the restaurant.</p> <ul style="list-style-type: none"> • Dana left after Paul but before Tyler. • Paul left between Alma and Chris. • Chris was the third person to leave. <p>In what order did the friends leave?</p>	<p>10. The mean of a particular set of seven numbers is 4. Six of the numbers in the set are known: 1, 2, 2, 5, 7 and 8.</p> <p>Identify the missing number: _____</p> <p>(Hint: Use a number line to think about mean as a balance point.)</p> 

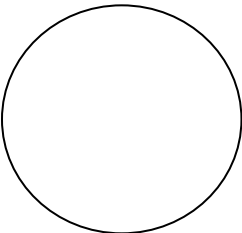
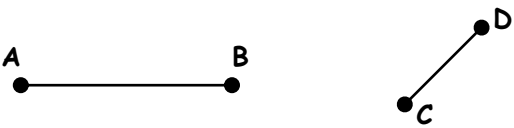
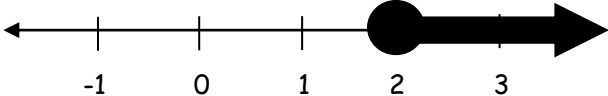
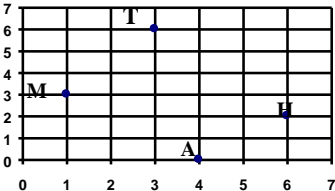
Week #5

<p>1. Explain why the probability of an event must be in between 0 and 1.</p>	<p>2. The ratio of girls to boys in a group is 3 to 5. Write this ratio in two other ways.</p>
<p>3. Write the inequality statement that describes the graph below.</p> 	<p>4. Find the value of the expression below:</p> $\frac{16 - 9 + (3 \times 5)}{3}$
<p>5. Multiply.</p> $2\frac{1}{3} \times 1\frac{1}{5}$	<p>6. How do you know that 14 is not in the sequence 0, 4, 8, 12,?</p>
<p>7. Graph: A (2,1). Graph four more points whose distance from A is 3 units.</p> 	<p>8. Use the formula $C = 2\pi r$ to find the circumference of this circle. $\pi = 3.14$</p> 
<p>9. Create a diagram to represent the expression below.</p> 4^2	<p>10. Matthew can usually cover 5.8 miles in one hour riding his bicycle. If he pedals twice as fast, how many hours it will take him to ride 36 miles?</p>

Week #6

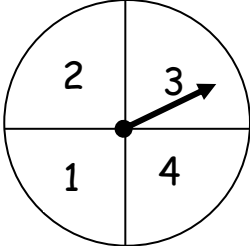
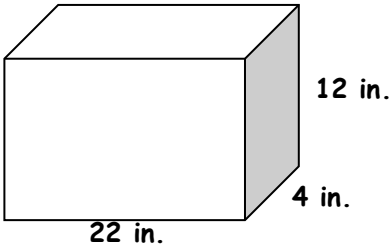
<p>1. The equation $6 \times 1 = 6$ is an example of which property of multiplication?</p>	<p>2. Which temperature is warmer, -2 degrees Fahrenheit or -17 degrees Fahrenheit?</p>
<p>3. Solve.</p> $\frac{1}{3} \div \frac{1}{2} =$	<p>4. In the figure below, all angles are right angles. What is the area? _____ What is the perimeter? _____</p> 
<p>5. Solve.</p> $a + 6\frac{1}{2} = 12$ <p>Is this problem an example of an expression, an equation, or an inequality?</p>	<p>6. In the polygon below, identify any pairs or groups of congruent angles.</p> 
<p>7. Joan has planted $\frac{3}{5}$ of her garden. What percent is planted?</p>	<p>8. Write an equation for the following problem, and let N stand for the answer. Then solve the problem:</p> <p>Steve is taking a test with 32 questions. If he misses six, how many will he answer correctly?</p>
<p>9. Place a point on the number line to represent the value three-fourths.</p> 	<p>10. Evaluate.</p> $3^2 \cdot 2^3 =$

Week #7

<p>1. Construct a circle graph to show the percentages of students voting for candidates A, B & C in the school election.</p> <p>15 students voted for A, 30 students voted for B, 45 students voted for C.</p> 	<p>2. Compare. Use $>$, $<$, or $=$.</p> <p>100% _____ 1</p>
<p>3. What does the phrase "measure of center" mean?</p>	<p>4. A new soccer field needs to be covered with sod. How many square meters of sod are needed if the field's measurements are 100 meters by 73 meters? Write the appropriate <u>formula</u> and show your work.</p>
<p>5. Do these line segments appear to be congruent? Why?</p> 	<p>6. Theater tickets cost \$23.00 each. Will \$450.00 be enough for 20 students to attend the theater? Show your work.</p>
<p>7. Write the inequality statement that describes the graph below.</p> 	<p>8. Give the coordinates for each point on the coordinate grid.</p> <p>M = _____ A = _____ T = _____ H = _____</p> 
<p>9. Complete the pattern.</p> <p>1, 2, 4, 8, 16, _____, _____, _____</p>	<p>10. Draw a representation of this problem:</p> $\frac{1}{2} \div 3 = \frac{1}{6}$

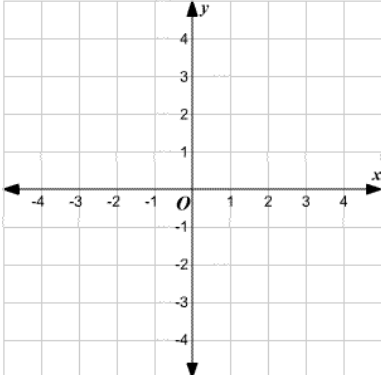


Summer Review for students who have COMPLETED Math 6

Week #8

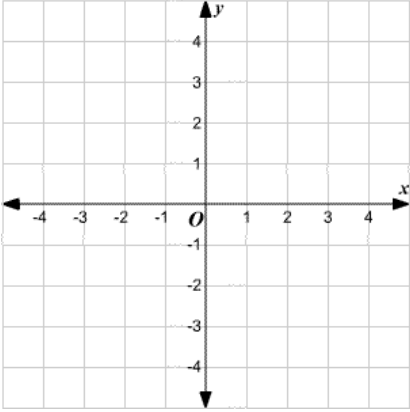
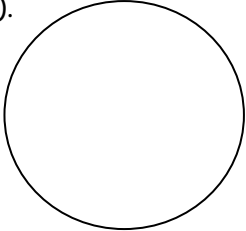
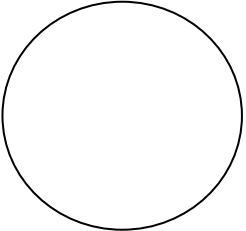
<p>1. Arrange from least to greatest.</p> <p>0.50 100% $\frac{3}{2}$ 90%</p>	<p>2. The temperature at 6:00 a.m. was -3° F. What was the temperature at 9:00 a.m. if it had risen 8 degrees.</p> <p>Hint: Use a number line to help find the answer.</p>
<p>3. A rectangular kitchen that is 11.5 feet by 24.5 feet is to be covered with one square-foot tiles. How many tiles will be needed?</p>	<p>4. In the word MATHEMATICS, write the ratio of vowels to consonants.</p>
<p>5. Find the product of two and one-half and four and three-fourths. Express your answer as a mixed number.</p>	<p>6. Your family spends 30% of its monthly income on food. If your family earns \$2000 a month, how much is spent on food?</p>
<p>7. I ate half of the apple pie. My brother ate a quarter of the pie. How much of the pie is left?</p> <p>Draw a diagram to show your answer.</p>	<p>8. Gina is going to spin the spinner below twice. What is the probability she will spin an <u>odd</u> number both times?</p> 
<p>9. Find the volume of the solid.</p> 	<p>10. How many one-halves ($\frac{1}{2}$)'s are there in 6?</p>

Summer Review for students who have COMPLETED Math 6

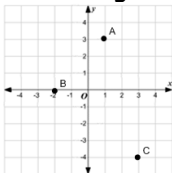
Week #9

<p>1. The Washington Monument is one of Washington D.C.'s most famous monuments. The height is about 10 times the length of the base. If the base measures $55\frac{1}{8}$ feet in length, about how high is the monument?</p>	<p>2. Pencils sell for \$1.80 per dozen.</p> <p>How much will 15 pencils cost?</p>
<p>3. Find the value of y.</p> $y = 2 + (4 \times 9) \div 12$	<p>4. Divide $\frac{5}{8}$ by 2.</p>
<p>5. Margaret slept for $9\frac{2}{3}$ hours last night, and Dolores slept for $6\frac{3}{4}$ hours. How many more hours of sleep did Margaret get than Dolores?</p>	<p>6. Graph these ordered pairs: J (-1, -2) K (0, 1) L (-3, 4)</p> 
<p>7. In what ways are the square and parallelogram alike? In what ways are they different?</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div>	<p>8. Complete the pattern: 1, 4, 9, 16, 25, 36, _____, _____, _____</p>
<p>9. The coach ordered 3 boxes of football jerseys. Each box contained 6 packages. Each package contained one dozen jerseys. How many jerseys did he order?</p>	<p>10. Create an equation to illustrate the inverse property for multiplication.</p>

Week #10

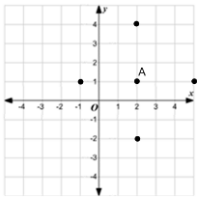
<p>1. Complete the equation.</p> <p>$17\% = \frac{\quad}{100} = \quad$ (decimal)</p>	<p>2. Complete the pattern.</p> <p>$2, 2\frac{1}{4}, 2\frac{1}{2}, 2\frac{3}{4}, \quad, \quad, \quad$</p>																
<p>3. While making cookies, William accidentally over-baked and burned many of the cookies. His "burned-to-unburned" ratio was 1 to 3. He made 45 unburned cookies. What percent of the total cookies were burned?</p>	<p>4. Complete by writing <u>greater</u> or <u>less</u>.</p> <p>a) Any positive integer is _____ than zero.</p> <p>b) Any negative integer is _____ than zero.</p> <p>c) Any positive integer is _____ than any negative integer.</p>																
<p>5. Graph <u>four</u> different points that meet this criteria: The x-coordinate is 2 units from the y-axis & the y-coordinate is 3 units from the x-axis.</p> 	<p>6. Ned, Jed, and Fred collect matchbox cars. The table shows how many of each color they own.</p> <table border="1" data-bbox="987 842 1346 995"> <thead> <tr> <th></th> <th>Red</th> <th>Blue</th> <th>Black</th> </tr> </thead> <tbody> <tr> <td>Ned</td> <td>4</td> <td>3</td> <td>1</td> </tr> <tr> <td>Jed</td> <td>1</td> <td>3</td> <td>4</td> </tr> <tr> <td>Fred</td> <td>1</td> <td>0</td> <td>7</td> </tr> </tbody> </table> <p>Construct a circle graph to show the percentage of total cars by <u>color</u> (red, blue, and black).</p> 		Red	Blue	Black	Ned	4	3	1	Jed	1	3	4	Fred	1	0	7
	Red	Blue	Black														
Ned	4	3	1														
Jed	1	3	4														
Fred	1	0	7														
<p>7. Julia read for $2\frac{1}{2}$ hours on Saturday, $1\frac{3}{4}$ hours on Sunday and $\frac{5}{6}$ of an hour on Monday. Write an expression to show the total amount of time Julia read. Then simplify it to find the result.</p>	<p>8. Using the information from problem #6, construct a circle graph to show the percentage of total cars by <u>owner</u> (Ned, Jed, & Fred).</p> 																
<p>9. An advertisement says that 4 out of 5 dentists prefer Trident gum. What percent is this?</p>	<p>10. It costs \$23.25 to fill up the gasoline tank on an average compact car. If the tank holds 15 gallons, what is the cost per gallon?</p>																

ANSWER KEY

<p>Week 1</p> <ol style="list-style-type: none"> 1. 2/5; 0.4 2. Shaded [closed] circle at 3, shading to the left of 3; inequality 3. 22/25 4. 3^4; $5^2 \times 7^3$; $4n^3m^2$ 5. a) soccer b) 100 6. a) 60 b) 20 c) 3 7. 5' 6 $\frac{1}{4}$" 8. 25% 9. (going across) 2, 4, 8, 16 10. Sample: $4 + 0 = 4$ 	<p>Week 2</p> <ol style="list-style-type: none"> 1. \$2.25 2. 3^2 3. About 6.6 lbs. 4. $x \leq 2$ 5. No, since the parentheses changes the order of operations. The results are 20 and 8. 6. 4/5; 0.8; between 0.5 and 1, a little off-center and closer to 1; any drawing with 4 parts out of 5 shaded. 7. $\frac{1}{4}$ 8. False. Congruent means they would have the same side lengths and angle measures. Not all triangles have the same lengths and measures. 9. 3/8 10. a) always b) sometimes
<p>Week 3</p> <ol style="list-style-type: none"> 1. Same: both are changing by a constant value of 5; Different: a is increasing while b is decreasing.  <ol style="list-style-type: none"> 2. 3. 78.5 cm² 4. 0 5. -5; numberline should show the numbers appropriately spaced and in this order from left-to-right: -5, -1, 0, 5 6. 1040 ft 7. 25 $\frac{2}{3}$ yds² 8. Unshaded (open) circle at -2; shading to the right of -2. 9. <; 4/5 is larger 10. 540 in³ 	<p>Week 4</p> <ol style="list-style-type: none"> 1. 8 $\frac{5}{12}$ cups 2. No whole number multiplied by itself is 50; closest are: $7 \times 7 = 49$ and $8 \times 8 = 64$. The square root of 50 would be a number between 7 & 8. 3. $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$ 4. R(-1, 2); S(3, 4); T(0, -4) 5. $\frac{1}{2}$, 0.5, 5/10, and .50 6. ABCD would be four times the size of the given square. 7. 110; mode not so helpful here, since there is not a number that repeats enough to say it represents the typical value. 8. 7 packages (there would be 15 leftover plates) 9. Alma, Paul, Chris, Dana, Tyler 10. 3
<p>Week 5</p> <ol style="list-style-type: none"> 1. The probability of an event must be between 0 and 1, because 0 represents no chance of the event happening, and 1 represents the event definitely happening. Probability may be in between these two absolutes, but not beyond. 2. 3/5; 3:5 3. 3. $x > -4$ 	<p>Week 6</p> <ol style="list-style-type: none"> 1. Identity 2. -2 degrees Fahrenheit is warmer 3. 2/3 4. 300 yds²; 80 yds 5. $5 \frac{1}{2}$; equation 6. B & E are congruent; A, F, & D are congruent. 7. 60% 8. $32 - 6 = N$; 26

Summer Review for students who have COMPLETED Math 6

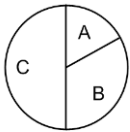
4. 4. $7 \frac{1}{3}$
5. 5. $2 \frac{4}{5}$
6. The sequence increases by 4... $12+4=16$, which skips 14.



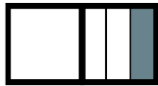
- 7.
8. 18.84 inches
9. Sample: a square with length and width of 4
10. About 3.1 hours

9. The point would go on the mark that is two units before 1.
10. 72

Week 7



- 1.
2. =
3. A measure of center is a way of communicating the "typical" value of the data set, usually in terms of the average, middle, or most frequent value in the set (mean, median, and mode).
4. $A = lw$; 7300 m^2
5. No, they do not appear to be the same length.
6. No, they would need another \$10.
7. $x \geq 2$
8. $M(1,3)$, $A(4,0)$, $T(3,6)$, $H(6,2)$
9. 32, 64, 128



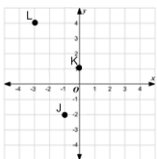
10. Sample:

Week 8

1. 0.50, 90%, 100%, $\frac{3}{2}$
2. 5 degrees Fahrenheit
3. 281.75 ft
4. $\frac{4}{7}$
5. $11 \frac{7}{8}$
6. \$600
7. $\frac{1}{4}$
8. $\frac{1}{4}$
9. 1056 in^3
10. 12

Week 9

1. $551 \frac{1}{4} \text{ ft}$
2. \$2.25 if sold individually; if only sold by the dozen, would need 2 dozen, costing \$3.60.
3. 5
4. $\frac{5}{16}$
5. $2 \frac{11}{12}$



- 6.
7. Alike: both are quadrilaterals; Different: The square must have four congruent sides and four right angles.
8. 49, 64, 81
9. 216 jerseys
10. Sample: $3 \times \frac{1}{3} = 1$

Week 10

1. 17; 0.17
2. 3 , $3 \frac{1}{4}$, $3 \frac{1}{2}$
3. 25%
4. $a) >$ $b) <$ $c) >$
5. Ordered pairs: $(2, 3)$, $(-2, 3)$, $(-2, -3)$, $(2, -3)$
6. Circle shows black 50%, red 25%, blue 25%
7. $2 \frac{1}{2} + 1 \frac{3}{4} + \frac{5}{6}$; $5 \frac{1}{12}$
8. Circle shows Ned 50%, Jed about 17%, and Fred about 33%.
9. 80%
10. \$1.55 per gallon