



Our mission is to create an inspiring, challenging, and supportive environment where students are encouraged and assisted in reaching their highest potential.

WMS Summer Math Packet 2017

For incoming 8th graders

Westerly Middle School
10 Sandy Hill Road
Westerly, RI 02891
T: 401-348-2750
F: 401-348-2752
TT/VOICE: 800-RI-55555
www.westerly.k12.ri.us

Paula Fusco
Principal

Stuart List
Assistant Principal

Kevin Cronin
Assistant Principal

Westerly Public Schools
School Committee Goals:

Support excellence in student
performance.

Recruit, retain, and develop
high quality staff.

Fully engage parents and
community.

Develop and implement
comprehensive financial
strategy.

Improve and maintain
Westerly School Facilities.


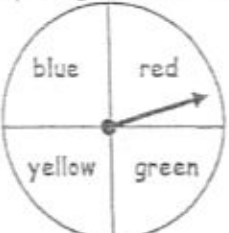
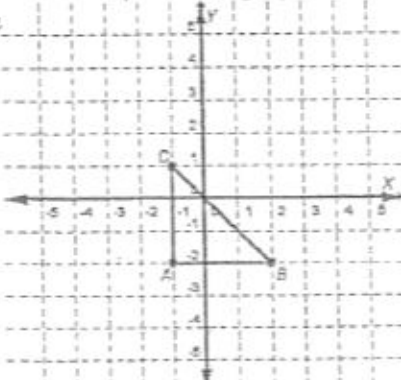
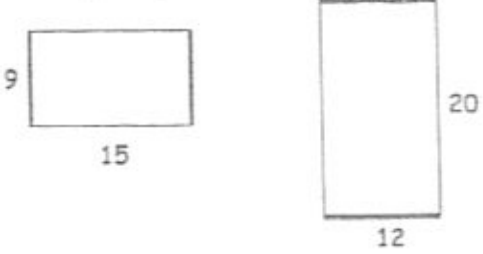
Dear Parent/Guardian:


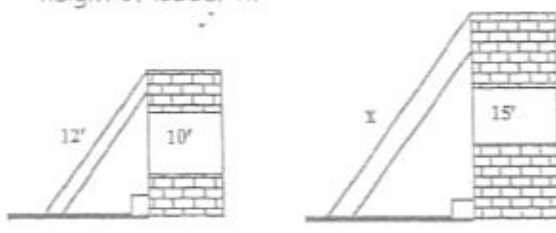
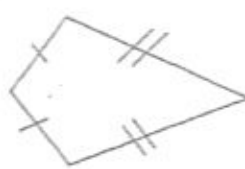
This summer, students are given the opportunity to enhance and broaden their mathematical background by completing a summer math packet. The packets can be found on the Westerly Public School Web Page; www.westerly.k12.ri.us

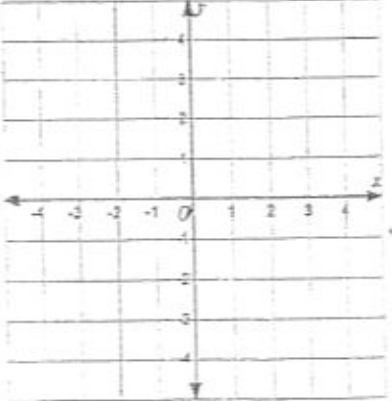
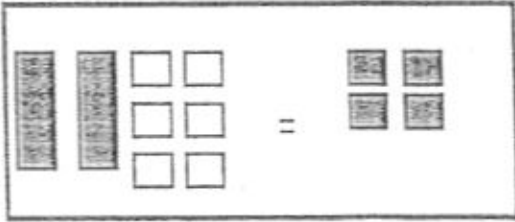
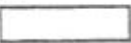
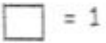


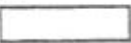
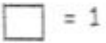


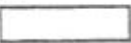
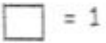


For those who do not have computer access, the packets will be placed in the main office at Westerly Middle School and in the main office at 23 Highland Avenue.

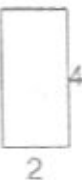



The problems in this packet are designed to help students review topics from previous mathematics courses that are important to their success. Please try to have students attempt each problem and show the work that goes with that answer. Bring the packet with you to your math class in September.

Thank you,
The Westerly Middle School Math Department

<p>1. Simplify:</p> $\frac{7-15}{-2}$	<p>2. The town of Pratt has a population of about 8,260,000. Express this number in scientific notation.</p>
<p>3. What is the value of the expression below when $a = -3$ and $b = 2$?</p> $a^2 + ab $	<p>4. Solve and graph the solution to the inequality on the number line.</p> $4 \geq x + 8$ 
<p>5. Mr. Nguyen saves \$120 of his income of \$800.00. What percent of his income does Mr. Nguyen save?</p>	<p>6. On this spinner, what is the theoretical probability of spinning a color that is <u>not</u> yellow?</p> 
<p>7. James owes \$185 on his credit card. He makes a \$65 payment and then purchases \$87 worth of clothes at a local department store. What is the integer that represents the balance owed on the credit card?</p>	<p>8. Marcela's grocery bills for three months were \$75, \$87, and \$25. To add the bills mentally, Marcela thought:</p> $75 + 87 + 25 = 75 + 25 + 87$ <p>What property did Marcela use?</p>
<p>9. If the triangle shown is translated vertically 3 units and horizontally -4 units, graph the image of the triangle.</p> 	<p>10. The rectangles below are similar. Write a proportion to show the relationship between the corresponding sides.</p> 

<p>1. Simplify: $-3(14 - 20) + 2$</p>	<p>2. Kia's height is one-fourth of Sammy's height. If Kia is $1\frac{1}{2}$ feet tall, how tall is Sammy?</p>										
<p>3. <u>Multiple Responses</u>: Circle the letters of the verbal expression(s) that match this algebraic expression: $6 - 3k$</p> <p>A. the product of 3 and k is <u>less than</u> 6</p> <p>B. the product of 3 and k <u>less than</u> 6</p> <p>C. the product of 3 and k <u>less</u> 6</p> <p>D. 6 is <u>less than</u> the product of 3 and k</p> <p>E. 6 <u>less than</u> the product of 3 and k</p> <p>F. 6 <u>less</u> the product of 3 and k</p>	<p>4.</p>  <p>1st wall 2nd wall 3rd wall</p> <p>How many bricks are in the 3rd wall? _____</p> <p>How many bricks would be in the 6th wall? _____</p> <p>Explain the pattern.</p>										
<p>5. Draw an isosceles trapezoid and label all congruent and parallel parts.</p>	<p>6. Solve: $13 = -3x - 8$</p>										
<p>7. Two ladders leaning against two walls happen to form two similar right triangles. What is the height of ladder x?</p> 	<p>8. What is the most specific name to classify this plane figure?</p>  <p>What are other names that accurately classify this figure?</p>										
<p>9. Sharon spends \$80.00 at the computer store. The tax on her purchase is \$4.00. Use a proportion to find the tax rate as a percent.</p>	<p>10. A card will be randomly selected from the cards shown below, and then replaced. A second card will then be selected.</p> <table border="1" data-bbox="909 1575 1315 1795"> <tbody> <tr> <td>4</td> <td>8</td> <td>12</td> <td>16</td> <td>20</td> </tr> <tr> <td>24</td> <td>28</td> <td>32</td> <td>36</td> <td>40</td> </tr> </tbody> </table> <p>What is the probability that the first card is a multiple of 8 and the second card is a perfect square?</p>	4	8	12	16	20	24	28	32	36	40
4	8	12	16	20							
24	28	32	36	40							

<p>1. Graph the equation:</p> $y = \frac{1}{3}x - 2$ 	<p>2. What value of x makes the model true?</p>  <p>Key:</p> <table border="0"> <tr> <td></td> <td>= x</td> <td></td> <td>= 1</td> </tr> <tr> <td></td> <td>= $-x$</td> <td></td> <td>= -1</td> </tr> </table>		= x		= 1		= $-x$		= -1				
	= x		= 1										
	= $-x$		= -1										
<p>3. What is 27,430,000 in scientific notation?</p>	<p>4. Ms. Ramos gives 8% of her income to charity. Ms. Ramos' monthly income is \$2000. How much does she give to charity each month?</p>												
<p>5. Jared flipped a fair coin 50 times. He expected half of his tosses to land on heads, but he only got heads 15 times. If he increased the number of times he flipped the coin to 500, he should expect the number of heads to be _____.</p>	<p>6. From the surface, a diver descended to 30 meters below sea level where she obtained a water sample. She then rose 12 meters and collected another water sample. How far below the surface was she when she collected the second sample?</p>												
<p>7. Evaluate: $\sqrt{81} - 3(\sqrt{25})$</p>	<p>8. Write this number in decimal notation instead of scientific notation: 3.2×10^5</p>												
<p>9. A tree 5 feet tall has a shadow that is 14 feet long. If another tree casts a shadow 21 feet long, at the same time of day, how tall is the tree?</p>	<p>10. Circle all expressions that are equivalent to 4.</p> <table border="1"> <tbody> <tr> <td>a) 4</td> <td>b) $\sqrt{4}$</td> <td>c) $-(-4)$</td> </tr> <tr> <td>d) -4</td> <td>e) 40%</td> <td>f) $- 4$</td> </tr> <tr> <td>g) 4%</td> <td>h) $\sqrt{16}$</td> <td>i) -4</td> </tr> <tr> <td>j) $\sqrt{8}$</td> <td>k) 4×10^1</td> <td>l) 400%</td> </tr> </tbody> </table>	a) $ 4 $	b) $\sqrt{4}$	c) $-(-4)$	d) -4	e) 40%	f) $- 4 $	g) 4%	h) $\sqrt{16}$	i) $ -4 $	j) $\sqrt{8}$	k) 4×10^1	l) 400%
a) $ 4 $	b) $\sqrt{4}$	c) $-(-4)$											
d) -4	e) 40%	f) $- 4 $											
g) 4%	h) $\sqrt{16}$	i) $ -4 $											
j) $\sqrt{8}$	k) 4×10^1	l) 400%											

<p>1. Two cards are chosen at random from a deck of 52 cards containing 13 hearts. The first card is NOT replaced. Write a fraction multiplication expression that could be used to find the probability of choosing two hearts.</p>	<p>2. Rewrite the exponential expression as a rational number:</p> 10^{-4}												
<p>3. Dolores pays \$25 per month for her cell phone bill. Complete the table to represent the relationship between the number of months, m, and her total payments, p, for varying numbers of months.</p> <table border="1" data-bbox="251 766 600 1024"> <thead> <tr> <th>Number of months m</th> <th>Total Payments p</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>\$25</td> </tr> <tr> <td>5</td> <td>\$125</td> </tr> <tr> <td>8</td> <td>\$200</td> </tr> <tr> <td>11</td> <td></td> </tr> <tr> <td></td> <td>\$425</td> </tr> </tbody> </table>	Number of months m	Total Payments p	1	\$25	5	\$125	8	\$200	11			\$425	<p>4. Together Juan and Michael score 31 goals during soccer season. Juan scored 19 goals and Michael scored the rest. Write an equation to show the number of goals scored by Michael. How many goals did Michael score?</p>
Number of months m	Total Payments p												
1	\$25												
5	\$125												
8	\$200												
11													
	\$425												
<p>5. The Munchery Restaurant advertises that you can have a different lunch combination every day of the year. They offer 12 different kinds of soups, 6 different sandwich meats and 4 different kinds of bread. Is their claim valid? Explain.</p>	<p>6. Jose plans to buy a pair of jeans that are on sale for 25% off. If the regular price is \$48, how much will he have to pay?</p>												
<p>7. Explain how a rectangle is different from a rhombus.</p>	<p>8. Solve: $2x - (-13) = 33$</p>												
<p>9. Which two rectangles are similar?</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>A</p>  </div> <div style="text-align: center;"> <p>B</p>  </div> <div style="text-align: center;"> <p>C</p>  </div> <div style="text-align: center;"> <p>D</p>  </div> </div>	<p>10. Elijah knew he needed to get an equivalent fraction before he could evaluate the expression $\frac{1}{5} + \frac{8}{15}$. He decided to multiply $\frac{1}{5}$ by $\frac{3}{3}$. What property did he use to get the equivalent fraction $\frac{3}{15}$?</p>												

<p>1. Sam has a paper route. Each week she earns \$10.00 plus \$0.10 for each paper she delivers. Last week she earned \$20. How many papers did she deliver? Explain your problem solving strategy.</p>	<p>2. A scale drawing of a rectangular room has a length of six inches and a width of 4 inches. The drawing uses a scale of 1 inch to 3 feet. Find the cost to carpet the room if carpeting costs \$5 per square foot.</p>												
<p>3. Solve: $4x - 2 = -26$</p>	<p>4. Solve: $-5z \geq 15$</p>												
<p>5. Holly decided to start an exercise program. She began by jogging for 1 min. on the first day, and then each new day she doubled her previous day's jogging time. She did this for 7 days. Make a table to show each day with time jogging each day. How long would she jog on the 7th day?</p>	<p>6. At night the average surface temperature on the planet Saturn is $-150^{\circ}C$. During the day the temperature rises $27^{\circ}C$. What is the temperature on the planet's surface during the day?</p>												
<p>7. Mr. Pucelli is making a histogram to show the scores on a test. Complete the missing bar in the histogram to show scores from 70-79.</p> <pre> 5 0 5 5 5 5 5 6 0 0 0 0 0 5 5 5 7 0 0 5 5 5 5 5 5 5 8 0 0 0 5 5 5 5 5 5 5 5 5 9 0 0 0 5 </pre> <table border="1"> <caption>Scores on Test</caption> <thead> <tr> <th>Score Range</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>50-59</td> <td>6</td> </tr> <tr> <td>60-69</td> <td>8</td> </tr> <tr> <td>70-79</td> <td>0</td> </tr> <tr> <td>80-89</td> <td>12</td> </tr> <tr> <td>90-99</td> <td>4</td> </tr> </tbody> </table>	Score Range	Frequency	50-59	6	60-69	8	70-79	0	80-89	12	90-99	4	<p>8. Rotate the rectangle clockwise 180 degrees about the origin.</p> <p>Which best describes the location of the image of vertex C?</p>
Score Range	Frequency												
50-59	6												
60-69	8												
70-79	0												
80-89	12												
90-99	4												