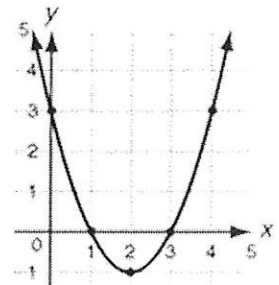


Name: \_\_\_\_\_

June 2 Key

CC Algebra Review Homework

4

Monday	Tuesday	Wednesday	Thursday																								
<p>Determine if (3,13) is a solution to the system</p> $\begin{cases} y = x + 10 \\ y = 2^x + 5 \end{cases}$ <p style="font-size: 1.5em; color: blue;">Same as HW #3</p>	<p>Write the exponential function that matches the table.</p> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <tr> <td>X</td> <td>-2</td> <td>-1</td> <td>0</td> <td>1</td> <td>2</td> </tr> <tr> <td>Y</td> <td><math>\frac{1}{9}</math></td> <td><math>\frac{1}{3}</math></td> <td>1</td> <td>3</td> <td>9</td> </tr> </table> <p style="font-size: 1.5em; color: blue;">y = 1(3)<sup>x</sup></p>	X	-2	-1	0	1	2	Y	$\frac{1}{9}$	$\frac{1}{3}$	1	3	9	<p>Write the equation if the roots equal -2 and 5</p> <p style="font-size: 1.5em; color: blue;">x = -2      x = 5</p> <p style="font-size: 1.5em; color: blue;">(x+2)(x-5) = y</p> <p style="text-align: center; font-size: 1.5em; color: blue;">OR</p> <p style="font-size: 1.5em; color: blue;">x<sup>2</sup> - 3x - 10 = y</p>	<p>Use the functions</p> $f(x) = x^2 + 2x + 5$ $g(x) = 5x - 1$ <p>for the following:</p> <p style="text-align: center;">f(x) - g(x)</p> $(x^2 + 2x + 5) - (5x - 1)$ $x^2 + 2x + 5$ $\underline{-5x + 1}$ $x^2 - 3x + 6$												
X	-2	-1	0	1	2																						
Y	$\frac{1}{9}$	$\frac{1}{3}$	1	3	9																						
<p>A graphing utility was used to produce a table of values for functions y<sub>1</sub> and y<sub>2</sub>. Determine the intersection of these two functions.</p> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <thead> <tr> <th>X</th> <th>Y<sub>1</sub></th> <th>Y<sub>2</sub></th> </tr> </thead> <tbody> <tr><td>-8</td><td>17</td><td>12</td></tr> <tr><td>-7</td><td>15</td><td>11</td></tr> <tr><td>-6</td><td>13</td><td>10</td></tr> <tr><td>-5</td><td>11</td><td>9</td></tr> <tr><td>-4</td><td>9</td><td>8</td></tr> <tr><td>-3</td><td>7</td><td>7</td></tr> <tr><td>-2</td><td>5</td><td>6</td></tr> </tbody> </table> <p style="font-size: 1.5em; color: blue;">(-4, 7)</p>	X	Y <sub>1</sub>	Y <sub>2</sub>	-8	17	12	-7	15	11	-6	13	10	-5	11	9	-4	9	8	-3	7	7	-2	5	6	<p>Solve the equation for x:</p> $m(x + y) = k$ $mx + my = k$ $mx = k - my$ $x = \frac{k - my}{m}$	<p>Mrs. Bear asked her class "Is the sum of 5.2 and <math>\sqrt{2}</math> rational or irrational?" Patrick answered that the sum would be irrational. State whether Patrick is correct or incorrect. Justify your reasoning.</p> <p style="font-size: 1.5em; color: blue;">Correct 5.2 + <math>\sqrt{2}</math> can't be written as a fraction</p>	<p>Write the equation of a line in slope intercept form of a line that has a slope of <math>-\frac{4}{3}</math> and contains (3, -6).</p> $y = mx + b$ $-6 = -\frac{4}{3}(3) + b$ $-6 = -4 + b$ $-2 = b$ $y = -\frac{4}{3}x - 2$
X	Y <sub>1</sub>	Y <sub>2</sub>																									
-8	17	12																									
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-5	11	9																									
-4	9	8																									
-3	7	7																									
-2	5	6																									
<p>A theater has 35 seats in the first row. Each row has four more seats than the row before it. Which expression represents the number of seats in the n<sup>th</sup> row?</p> <ol style="list-style-type: none"> <li>1) 35 + (n + 4)</li> <li>2) 35 + (4n)</li> <li>3) 35 + (n + 1)(4)</li> <li>4) 35 + (n - 1)(4)</li> </ol> <p style="font-size: 1.5em; color: blue;">35 39 43</p>	<p>Connor wants to attend the town carnival. The price of admission to the carnival is \$4.50, and each ride costs an additional 79 cents. If he can spend at most \$16.00 at the carnival, write an inequality that can be used to solve for r, the number of rides Connor can go on</p> $.79r + 4.50 \leq 16$ <p style="font-size: 1.5em; color: blue;">r = 14</p>	<p>Tanisha and Rachel had lunch at the mall. Tanisha ordered three slices of pizza and two colas. Rachel ordered two slices of pizza and three colas. Tanisha's bill was \$6.00, and Rachel's bill was \$5.25. Write two equations</p> $3P + 2C = 6$ $2P + 3C = 5.25$	 <p>Identify the vertex: <math>(2, -1)</math></p> <p>Minimum or maximum? min</p> <p>Estimate the zeros: x = 1, 3</p> <p>Identify the y-int: y = 3</p>																								

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CC Algebra Review Homework

<p>The width of a rectangle is 3 less than twice the length, <math>x</math>. If the area of the rectangle is 43 square feet, write an equation that can be used to find the length, in feet?</p> <p><math>L = x</math>  <math>W = 2x - 3</math></p> <p><math>x(2x - 3) = 43</math></p>	<p style="text-align: center;"><del>Use the quadratic formula to solve</del></p> <p style="text-align: center;"><del><math>2x^2 - x + 3 = 0</math></del></p> <p style="text-align: center;"><del><math>x = \frac{1 \pm \sqrt{(-1)^2 - 4(2)(3)}}{2(2)}</math></del></p> <p style="text-align: center;"><del><math>x = \frac{1 \pm \sqrt{-23}}{4}</math></del></p>	<p>Using the equations to the above: What was the price of one slice of pizza? What was the price of one cola?</p> <p><math>2(3P + 2C = 6)</math>  <math>-3(2P + 3C = 5.25)</math></p> <hr style="width: 50%; margin: 0 auto;"/> <p><math>6P + 4C = 12</math>  <math>-6P - 9C = -15.75</math></p> <hr style="width: 50%; margin: 0 auto;"/> <p><math>-5C = -3.75</math>  <math>C = 0.75</math></p> <p><math>2P + 2(0.75) = 6</math>  <math>2P + 1.5 = 6</math>  <math>2P = 4.50</math>  <math>P = 2.25</math></p>	
<p>The current population of a town is 10,000. If the population, <math>P</math>, increases by 20% each year, write an equation that could be used to find the population after <math>t</math> years?</p> <p><math>P = 10000(1 + 0.2)^t</math></p>	<p>The equation <math>A = 1300(1.02)^t</math> is being used to calculate the amount of money in a savings account. What does 1.02 represent in this equation?</p> <ol style="list-style-type: none"> <li>1) 0.02% decay</li> <li>2) 0.02% growth</li> <li>3) 2% decay</li> <li>4) 2% growth</li> </ol>	<p>The current student population of the Brentwood Student Center is 2,000. The enrollment at the center increases at a rate of 4% each year. To the <i>nearest whole number</i>, what will the student population be closest to in 3 years'?</p> <p><math>P = 2000(1 + 0.04)^3</math></p> <p style="text-align: center; font-size: 1.2em;">2250</p>	<p>Is the equation <math>A = 21000(1 - 0.12)^t</math> a model of exponential growth or exponential decay, and what is the rate (percent) of change per time period?</p> <p style="text-align: center; font-size: 1.2em;">decay</p> <p style="text-align: center; font-size: 1.2em;"><math>r = 12\%</math></p>

### My Progress

MONDAY	TUESDAY	WEDNESDAY	THURSDAY
# of questions _____	# of questions _____	# of questions _____	# of questions _____
# correct _____	# correct _____	# correct _____	# correct _____
I need more help with... _____	I need more help with... _____	I need more help with... _____	I need more help with... _____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____