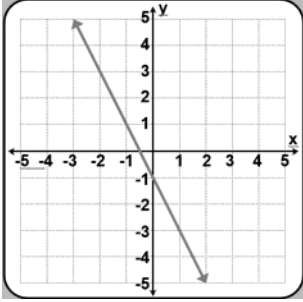


👁️👁️👁️👁️👁️ Show work on any question for partial credit – Many questions REQUIRE work for full credit. 👁️👁️👁️👁️👁️

Multiple Choice: No work required to be shown, but partial credit will be given for any correct work shown. 6 pts each.

<p>1. Find the slope and y-intercept of the line</p> <p><math>y = 2x + 10</math></p> <p>A) <math>m = -2, b = 0</math>                      B) <math>m = 2, b = 10</math>                      C) <math>m = 2, b = -10</math>                      D) <math>m = -10, b = 2</math></p>	<p>2. Find the equation of the line given:</p> <p><math>m = -1, b = -4</math></p> <p>A) <math>y = -x + 4</math>                      B) <math>y = x + 4</math>                      C) <math>y = -x - 4</math>                      D) <math>y = x - 4</math></p>												
<p>3. What is the slope or rate of change from the table?</p> <table border="1" data-bbox="110 814 261 1008"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>8</td> </tr> <tr> <td>4</td> <td>6</td> </tr> <tr> <td>5</td> <td>4</td> </tr> <tr> <td>7</td> <td>2</td> </tr> <tr> <td>8</td> <td>0</td> </tr> </tbody> </table> <p>A) <math>m = 2</math>                  B) <math>m = -2</math>                      C) <math>m = \frac{-1}{2}</math>                  D) <math>m = \frac{1}{2}</math></p>	x	y	3	8	4	6	5	4	7	2	8	0	<p>4. What is the vertex and axis of symmetry?</p>  <p>A) <math>m = \frac{-1}{3}</math>                  B) <math>m = -3</math>                      C) <math>m = \frac{1}{3}</math>                  D) <math>m = 3</math></p>
x	y												
3	8												
4	6												
5	4												
7	2												
8	0												
<p>5. Find the equation of the line given slope and a point.</p> <p><math>m = 4</math> and <math>(2, 1)</math></p> <p>A) <math>y = -4x - 7</math>                      B) <math>y = 4x - 7</math>                      C) <math>y = 4x + 7</math>                      D) <math>y = -4x + 7</math></p>	<p>6. Find the equation from the table.</p> <table border="1" data-bbox="824 1338 963 1505"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>-1</td> <td>10</td> </tr> <tr> <td>0</td> <td>5</td> </tr> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>2</td> <td>-5</td> </tr> <tr> <td>3</td> <td>-10</td> </tr> </tbody> </table> <p>A) <math>y = 4x + 5</math>                      B) <math>y = 5x + 5</math>                      C) <math>y = -5x + 5</math>                      D) <math>y = 5x</math></p>	x	y	-1	10	0	5	1	0	2	-5	3	-10
x	y												
-1	10												
0	5												
1	0												
2	-5												
3	-10												
<p>7. Find the common difference and the next two numbers in the sequence.</p> <p><math>-5, 2, 9, 16, 23, \underline{\hspace{1cm}}, \underline{\hspace{1cm}}</math></p> <p>A) Com. dif. = <math>-7</math> ; Next two = <math>37, 44</math>                      B) Com. dif. = <math>7</math> ; Next two = <math>30, 37</math>                      C) Com. dif. = <math>7</math> ; Next two = <math>37, 44</math>                      D) Com. dif. = <math>-7</math> ; Next two = <math>30, 37</math></p>	<p>8. Find the common ratio and the next two numbers in the sequence.</p> <p><math>5, -25, 125, \underline{\hspace{1cm}}, \underline{\hspace{1cm}}</math></p> <p>A) Com. rat. = <math>5</math> ; Next two = <math>-130, 135</math>                      B) Com. rat. = <math>\frac{1}{5}</math> ; Next two = <math>-625, 3125</math>                      C) Com. rat. = <math>-5</math> ; Next two = <math>-625, 3125</math>                      D) Com. rat. = <math>5</math> ; Next two = <math>-625, 3125</math></p>												
<p>9. Which of the following is a geometric sequence?</p> <p>A) <math>1, 1, 2, 3, 5\dots</math>                      B) <math>5, -20, 80, -320, 1280\dots</math>                      C) <math>2, 12, 22, 32, 42\dots</math>                      D) <math>5, 8, 24, 72, 216\dots</math></p>	<p>10. Simplify the radical</p> <p><math>\sqrt{40}</math></p> <p>A) <math>10\sqrt{10}</math>                      B) <math>4\sqrt{10}</math>                      C) <math>20</math>                      D) <math>\sqrt{40}</math></p>												

Written Response: All work must be show for full credit. Algebraic solutions are necessary. 8 pts each.

11. Simplify the radical.

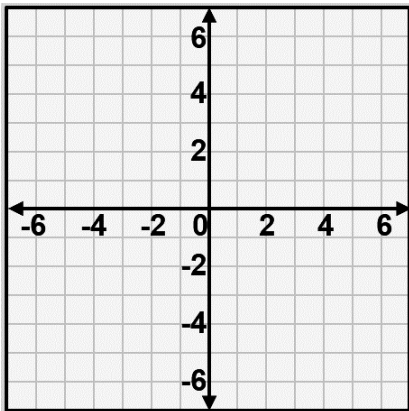
$$\sqrt{44}$$

12. Find the equation of the line given slope and a point.

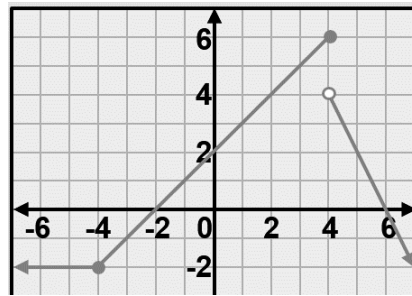
$$m = 6 \text{ and } (-4, 5)$$

13. Graph the piecewise function.

$$y = \begin{cases} -x, & \text{if } x \leq -2 \\ 2, & \text{if } -2 < x < 1 \\ 2x - 3, & \text{if } x \leq 1 \end{cases}$$



14. Find the piecewise function from the graph



$$y = \begin{cases} \quad \quad \quad , & \text{if } x \\ \quad \quad \quad , & \text{if } x \end{cases}$$

15. Give an example of a geometric sequence with a common ratio of 3. Show five terms of the sequence.

Bonus: Something about sequences...

