

Geometry Readiness Practice 5

... Graphing Equations

... Graphing Inequalities

Unit E: Linear Equations & Inequalities and Their Graphs

Be able to:

- Find rate of change (slope) from a table.
- Calculate the slope of a line, given two points or the graph of a line
- Recognize that a line with a positive slope rises to the right, while a line with a negative slope falls to the right
- Find the slope of a horizontal or vertical line
- Graph a line in slope-intercept form, using the y-intercept and the slope
- Graph a line in standard form, using the x-intercept and y-intercept
- Write an equation of a line in slope-intercept form, given the slope and y – intercept, or two points
- Write the equation of a line, given its graph
- Recognize whether a given pair of lines are parallel or perpendicular or neither
- Write the equation of a line, given one point and the equation of a parallel or perpendicular line
- Write linear equations to model and solve real-world applications
- Graph linear inequalities, recognizing that the graph is a shaded region of the coordinate plane and that $<$ and $>$ require a dashed boundary line, while \leq and \geq require a solid boundary line

1) What is the y-intercept of

$$y = \frac{1}{3}x - 7?$$

2) What are the x- and y-intercepts of

$$3x - 7y = 12?$$

3) Find the slope of the line that passes through the points (2, 7) and (-2, 5)

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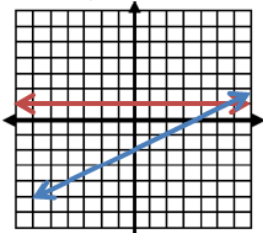
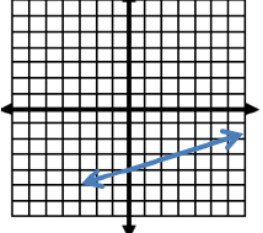
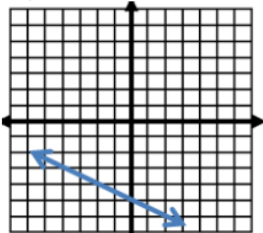
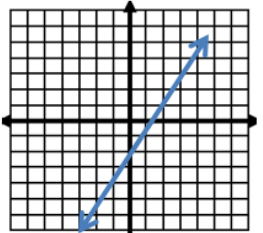
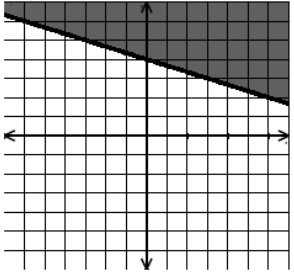
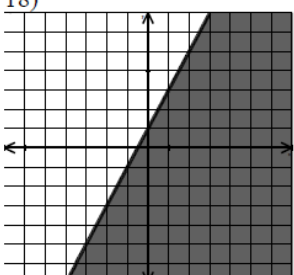
<p>4) Find the slope of the line.</p>	<p>5) Find the equation of the line.</p>	<p>6) Write an equation for the line through the point $(4, -1)$ with slope $= \frac{-1}{3}$.</p> <p>7) What is the y-intercept of $7x - 3y = 6$?</p> <p>8) Find the slope of the line containing the points $(-2, 3)$ and $(0, 8)$.</p>
<p>Graph the following linear equations on graph at the right.</p> <p>9) $y = 1$</p> <p>10) $2x - 4y = 8$</p>		<p>11) State the slope of $y = -2x + 12$.</p> <p>12) Write the equation of the line in slope-intercept form with slope $= \frac{1}{4}$ and y-intercept of $(0, 3)$.</p> <p>13) What is the slope of the line defined by $x = 2$?</p>
<p>14) State the slope and y-intercept of $y = \frac{1}{3}x - 4$. Graph the line.</p>	<p>15) Graph: $y = \frac{-1}{2}x - 5$</p>	<p>16) Graph: $y = \frac{5}{3}x - 2$</p>
<p>17) Graph: $y > \frac{-1}{3}x + 4$</p>	<p>18) Graph: $y \leq 2x + 1$</p>	

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Answers

<p>ANSWERS for Unit E</p> <p>1) $(0, -7)$</p> <p>2) $x\text{-int}(4, 0)$ $y\text{-int}(0, \frac{12}{-7})$</p> <p>3) $m = \frac{1}{2}$</p> <p>4) $m = 2$</p> <p>5) $(y-2) = \frac{5}{6}(x-3)$ or $y = \frac{5}{6}x - \frac{1}{2}$</p> <p>6) $(y+1) = \frac{-1}{3}(x-4)$ or $y = \frac{-1}{3}x + \frac{1}{3}$</p> <p>7) $(0, -2)$</p> <p>8) $m = \frac{5}{2}$</p>	<p>9 and 10)</p>  <p>11) $m = -2$</p> <p>12) $y = \frac{-1}{4}x + 3$</p> <p>13) undefined</p> <p>14) $m = \frac{1}{3}, (0, -4)$</p> 	<p>15)</p>  <p>16)</p> 	<p>17)</p>  <p>18)</p> 
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