

**Algebra 1 FER #1**  
**Fall 2015**

Name \_\_\_\_\_

Period \_\_\_\_\_

SHOW ALL WORK FOR CREDIT AND BOX YOUR ANSWER

1) Simplify and reduce. (Skills #1, 3)

a) $\frac{-3}{5} + \frac{2}{9} =$	b) $\frac{4}{15} - \frac{17}{30} =$	c) $\frac{4}{18} \times \frac{6}{5} =$	d) $\frac{1}{3} \div \frac{5}{12} =$	e) $\left(\frac{-3}{4}\right)^3 =$
-----------------------------------	-------------------------------------	--	--------------------------------------	------------------------------------

2) Simplify the expressions. (Skill #5)

a) $7x - 3(2x - 4)$	b) $14x - 5y + 2x + 3y + 5z$
---------------------	------------------------------

3) Solve for x using fraction busters to clear fractions. (Skill #6)

a) $\frac{1}{8}x - 2 = \frac{3}{24}$	b) $\frac{1}{3}x + \frac{2}{5} = \frac{5}{6}$
--------------------------------------	---

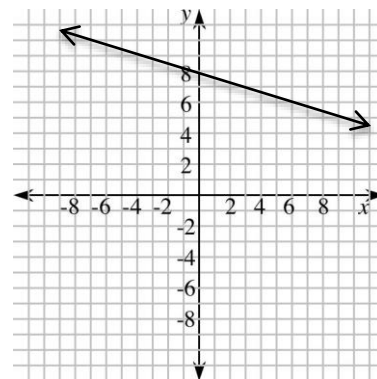
4) Solve for x. (Skill #7)

a) $8x - 4 = 28$	b) $7x - 13 = 4x + 3$
------------------	-----------------------

5) Find the slope. (Skill #9)

a) Determine the slope of a line that passes through the points (3, -6) and (-5, 10) using the slope formula.

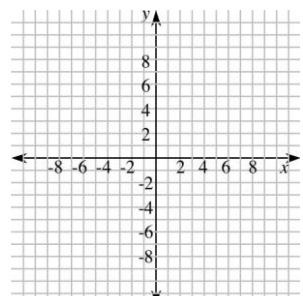
b) Determine the slope of the line on the graph using a slope triangle.



6) Write the equation of the in **slope intercept form**  $y=mx+b$  (Skill #10, 11,12)

a) That has a slope of 4 and a y-intercept of (0, -8).	b) That has a slope of $\frac{-4}{3}$ and passes through the point (-2, 9).	c) That passes through the points (7,-3) and (3,9).
--	---	---

7) Determine the x and y-intercepts and graph the line containing these two points. (Skill #13)

$y = -3x - 9$ <p>x-intercept: (y=0)</p> <p>y-intercept: (x=0)</p> <p>x-int: (     ,     )</p> <p>y-int: (     ,     )</p>	
---	--

8) Determine if the point is on line. (Skill #14)

<p>Is the point (6, 16) on the graph of the line <math>-4x + 2y = 8</math>?</p> <p style="text-align: right;">Yes / No</p>
--

9) Horizontal and Vertical Lines (Skill #15)

<p>a) Circle the correct equation of the horizontal line that passes through (2,7)</p> <p><math>y = 2</math>      <math>y = 7</math>      <math>x = 2</math>      <math>x = 7</math></p>	<p>b) Circle the correct equation of the vertical line that passes through (-7,10)</p> <p><math>y = -7</math>      <math>y = 10</math>      <math>x = -7</math>      <math>x = 10</math></p>
--	--

10) Parallel and Perpendicular Lines (Skill #16)

<p>a) Write the equation of the line that is <b>parallel</b> to <math>-3x - 4y = 24</math> and passes through the point (8, 4) in slope-intercept form.</p>	<p>b) Are these lines perpendicular?  <math>y = x + 13</math>      <math>y = -x - 13</math>      Yes / No</p> <p>c) Why are the above lines in (b) either perpendicular or not?</p>
---	---