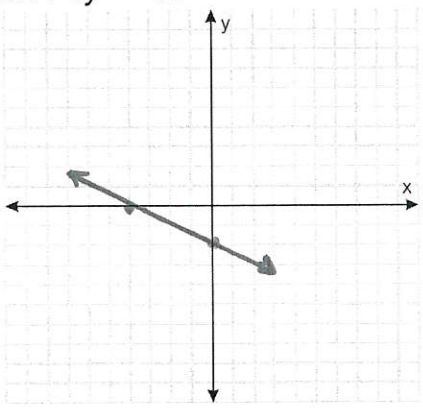
Name: Key Class: _____ Date: _____ ID: A

Unit 5 Review

~~Unit 5 Test - 40 Points Total~~

Graph each equation. (2 Points Each)

1 $3x + 6y = -12$



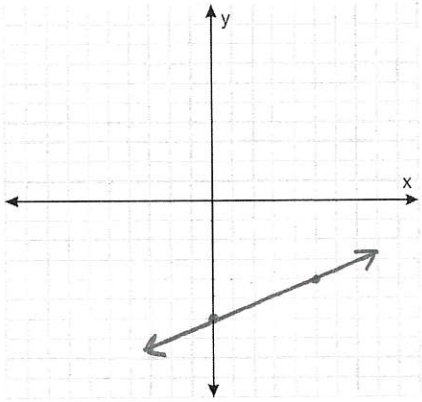
$\frac{3x}{3} = \frac{-12}{3}$

$x = -4$

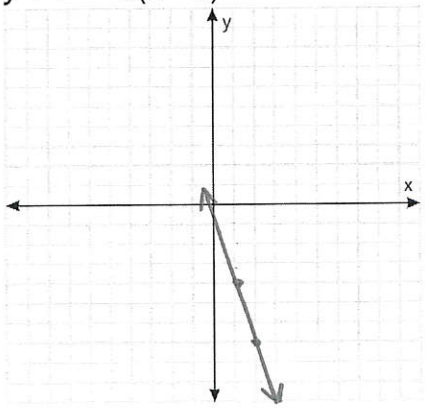
$\frac{6y}{6} = \frac{-12}{6}$

$y = -2$

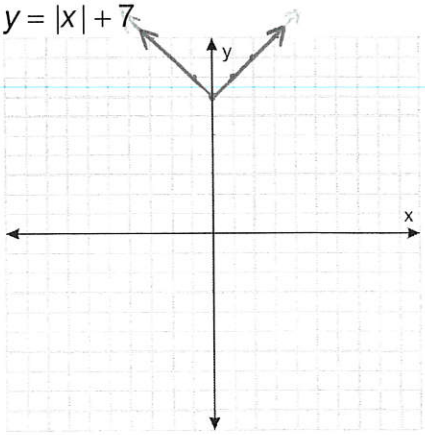
2 $y = \frac{2}{5}x - 6$



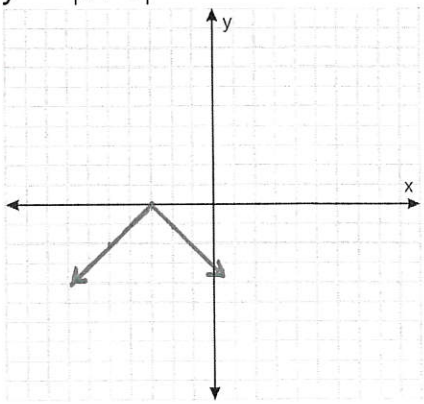
3 $y + 4 = -3(x - 1)$



4 $y = |x| + 7$



5 $y = -|x + 3|$



Write each equation in slope-intercept form. (2 Points Each)

6 $10x + 5y = -35$

$-10x \quad -10x$

$\frac{5y}{5} = \frac{-10x}{5} - \frac{35}{5}$

$y = -2x - 7$

7 $y + 7 = -2(x - 3)$

$y + 7 = -2x + 6$

$-7 \quad -7$

$y = -2x - 1$

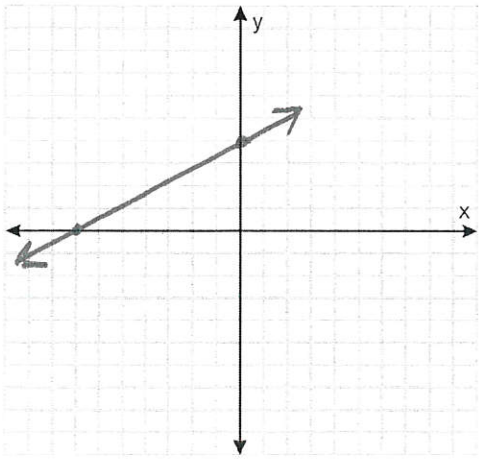
Name: Key ID: A

Find the x-intercept and y-intercept. Then graph the equation. (4 Points)

8 $4x - 7y = -28$

$\frac{4x}{4} = \frac{-28}{4}$ $x = -7$

$\frac{-7y}{-7} = \frac{-28}{-7}$ $y = 4$



Write an equation in point-slope form for the line that has the given slope m and that passes through the given point. (2 Points)

9 $m = -\frac{9}{5}$; $(-5, 6)$

$y - 6 = -\frac{9}{5}(x + 5)$

Write an equation in slope-intercept form for the line that passes through the given points. (2 Points)

10 $(2, -3)$ and $(-8, 5)$

$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{5 - (-3)}{-8 - 2} = \frac{8}{-10} = -\frac{4}{5}$

$y = -\frac{4}{5}x + b$

$-3 = -\frac{4}{5}(2) + b$

$-3 = -\frac{8}{5} + b$

$-\frac{15}{5} = -\frac{8}{5} + b$

$+\frac{8}{5} \quad +\frac{8}{5}$

$b = -\frac{7}{5}$

$y = -\frac{4}{5}x - \frac{7}{5}$

Write an equation in slope-intercept form for the line that passes through the given point and is <u>perpendicular</u> to the given line. (2 Points)

11 $(4, -7)$; $y = 3x + 17$

$m = -\frac{1}{3}$

$y = -\frac{1}{3}x + b$

$-7 = -\frac{1}{3}(4) + b$

$-7 = -\frac{4}{3} + b$

$-\frac{21}{3} = -\frac{4}{3} + b$

$+\frac{4}{3} \quad +\frac{4}{3}$

$-\frac{17}{3} = b$

$y = -\frac{1}{3}x - \frac{17}{3}$