Course 3

Name Key

Date _____ Period 2

Writing Equations given two points

Write the slope-intercept form of the equation of each line given the slope and y-intercept.

1) Slope = 4, y-intercept = 3

$y = 4x + 3$

2) Slope = –1, y-intercept = 1

$y = -x + 1$

Write the slope-intercept form of the equation of the line through the given point with the given slope.

3) through: (5, 1), slope = $-\frac{2}{5}$

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

$1 = -2 + b$

$3 = b$

4) through: (2, –4), slope = $-\frac{7}{2}$

$-4 = -\frac{7}{2}(2) + b$ $y = -\frac{7}{2}x + 3$

$-4 = -7 + b$

$3 = b$

Write the slope-intercept form of the equation of the line through the given points.

5) through: (2, 0) and (4, 4)

$m = \frac{4-0}{4-2} = \frac{4}{2} = 2$

$0 = 2(2) + b$

$-4 = b$

$y = 2x - 4$

6) through: (0, –4) and (–3, –1)

$\frac{-4-(-1)}{-3-0} = \frac{-3}{-3} = 1$

$-4 = 1(0) + b$

$-4 = b$

$y = x - 4$

7) through: (1, 3) and (0, –4)

$\frac{-4-3}{0-1} = \frac{-7}{-1} = 7$

$3 = 7(1) + b$

$-4 = b$

$y = 7x - 4$

8) through: (2, 3) and (0, –3)

$\frac{-3-3}{0-2} = \frac{-6}{-2} = 3$

$3 = 3(2) + b$

$-3 = b$

$y = 3x - 3$

9) through: (0, 4) and (–5, 0)

$\frac{0-4}{-5-0} = \frac{-4}{-5} = \frac{4}{5}$

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

10) through: (0, 4) and (–5, 5)

$\frac{5-4}{-5-0} = \frac{1}{-5}$

$y = -\frac{1}{5}x + 4$

11) through: (0, –3) and (–5, –5)

$\frac{-5-(-3)}{-5-0} = \frac{-2}{-5}$

$y = \frac{2}{5}x - 3$

12) through: (0, 5) and (4, –4)

$\frac{5-(-4)}{0-4} = \frac{9}{-4}$

$y = -\frac{9}{4}x + 5$

13) through: (3, 4) and (0, –2)

$\frac{6}{3} = 2$

$y = 2x - 2$

14) through: (0, –1) and (–4, 5)

$\frac{6}{-4} = -\frac{3}{2}$

$y = -\frac{3}{2}x - 1$

Key

3

Kuta Software - Infinite Algebra 1

Name_____

Writing Linear Equations

Date_____ Period____

Write the slope-intercept form of the equation of each line.

1) $3x-2y=-16$

$-2y=-3x-16$

$y=\frac{3}{2}x+8$

2) $13x-11y=-12$

$-11y=-13x-12$

$y=\frac{13}{11}x+\frac{12}{11}$

3) $9x-7y=-7$

$-7y=-9x-7$

$y=\frac{9}{7}x+1$

4) $x-3y=6$

$-3y=-x+6$

$y=\frac{1}{3}x-2$

5) $6x+5y=-15$

$5y=-6x-15$

$y=\frac{-6}{5}x-3$

6) $4x-y=1$

$-y=-4x+1$

$y=4x-1$

7) $11x-4y=32$

$-4y=-11x-32$

$y=\frac{11}{4}x+8$

8) $11x-8y=-48$

$-8y=-11x-48$

$y=\frac{11}{8}x+6$

Standard Form of a Linear Equation
Worksheet

Name _____
Date _____ Block _____

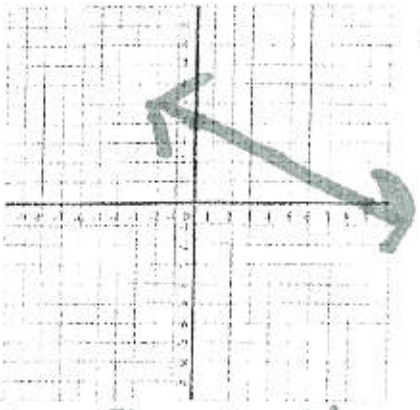
4

Find the x- and y-intercepts of each equation and then graph the line.

1) $x + 2y = 8$

$x = 8$

$y = 4$



x-int = 8 y-int = 4

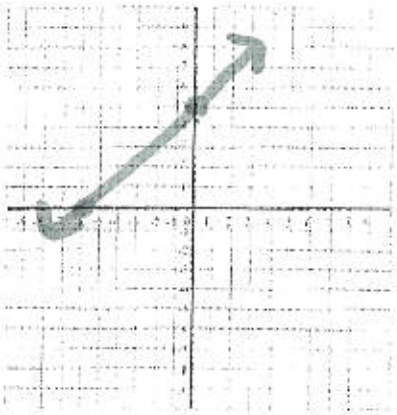
2) $3x - y = 9$

x-int = 3 y-int = -9

3) $-5x + 6y = 30$

$6y = 30$

$-5x = 30$

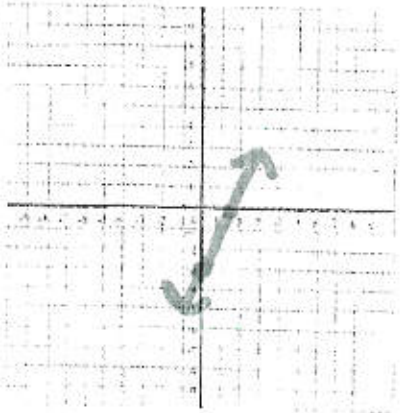


x-int = -6 y-int = 5

4) $-6x + 3y = -9$

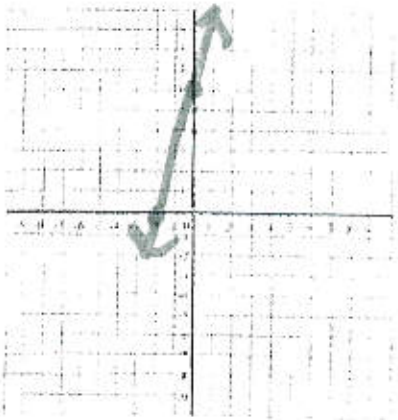
$3y = -9$

$-6x = -9$



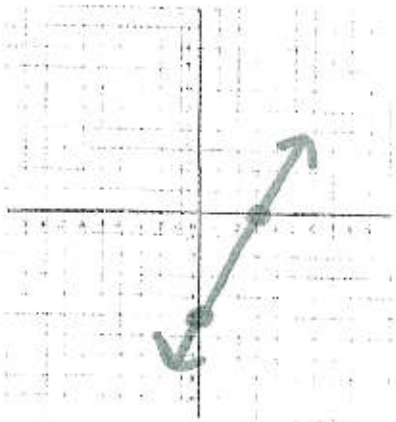
x-int = 3/2 y-int = -3

5) $-3x + y = 6$



x-int = -2 y-int = 6

6) $5x - 3y = 15$



x-int = 3 y-int = -5

Name KEY Date: _____ Period: 5

Point-Slope Form (Practice Worksheet)

Write an equation in point-slope form of the line that passes through the given point and has the given slope.

1. (2, 7); m = -4

$y - 7 = -4(x - 2)$

2. (12, 5); m = -3

$y - 5 = -3(x - 12)$

3. (4, -5); m = 6

$y + 5 = 6(x - 4)$

4. (-6, -2); m = 3

$y + 2 = 3(x + 6)$

5. (7, -6); m = $\frac{1}{2}$

$y + 6 = \frac{1}{2}(x - 7)$

6. (-8, 2); m = $-\frac{3}{4}$

$y - 2 = -\frac{3}{4}(x + 8)$

Graph the equations below.

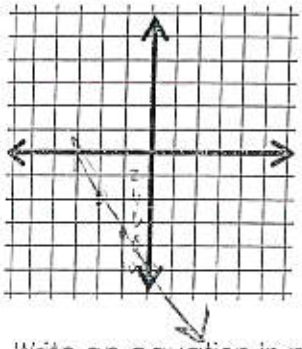
7. $y + 4 = -3(x + 2)$

$y + 4 = -3x - 6$

$y = -3x - 10$

m = -3

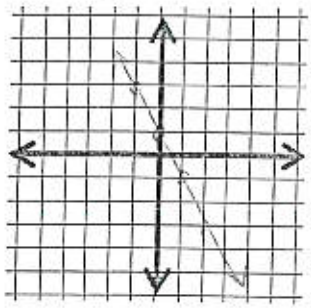
(-1, -4)



8. $y + 3 = -2(x - 2)$

$y + 3 = -2x + 4$

$y = -2x + 1$



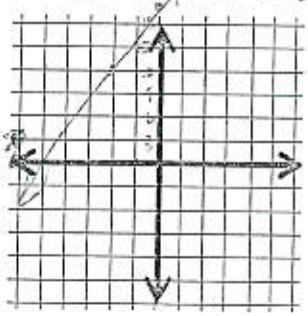
9. $y - 1 = 3(x + 6)$

$y - 1 = 3x + 18$

$y = 3x + 19$

m = 3

(-6, 1)

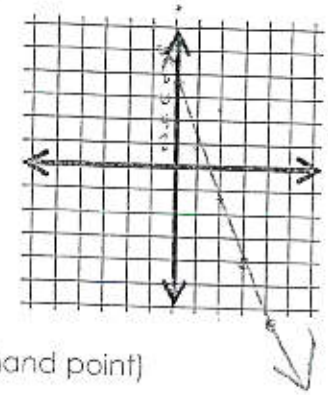


10. $y + 4 = \frac{-5}{2}(x - 3)$

$y + 4 = -\frac{5}{2}x + 7\frac{1}{2}$

$\frac{-5}{2}x \; \frac{-3}{1}$

$\frac{\#5}{2} \; \frac{\#2}{2}$

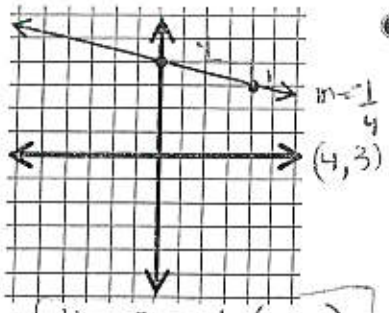


m = $\frac{-5}{2}$

(3, -4)

Write an equation in point-slope form of the line graphed below. (Use the right hand point)

11.

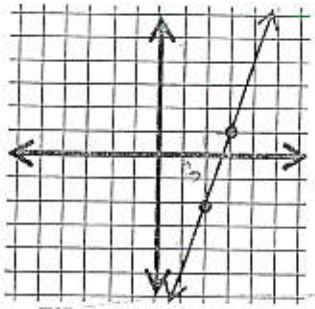


m = $-\frac{1}{4}$

(4, 3)

$y - 3 = -\frac{1}{4}(x - 4)$

12.

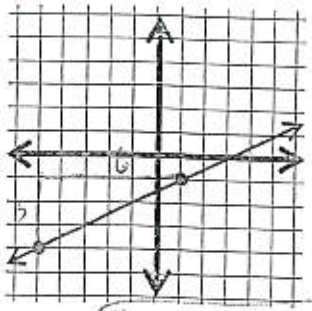


m = 3

(3, 1)

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

13.



m = $\frac{1}{2}$

$\frac{3}{6} = \frac{1}{2}$

(1, -1)

$y + 1 = \frac{1}{2}(x - 1)$

Write an equation in point-slope form of the line that passes through the two points given. Use the first point to write the equation.

14. (4,7) and (5, 1)

$m = \frac{7 - 1}{4 - 5} = \frac{6}{-1} = -6$

$y - 7 = -6(x - 4)$

15. (9, -2) and (-3, 2)

$m = \frac{-2 - 2}{9 - (-3)} = \frac{-4}{12} = \frac{-1}{3}$

$y + 2 = \frac{-1}{3}(x - 9)$

16. (3, -8) and 7(-2)

$m = \frac{-8 + (+2)}{3 + 7} = \frac{-6}{-4} = \frac{3}{2}$

$y + 8 = \frac{3}{2}(x - 3)$