

Geometry Worksheet 3-6

Name: Kell

Find the slope between the following points.

1) (2,4) and (5,9)

$$m = \frac{9-4}{5-2} = \frac{5}{3}$$

2) (-3,7) and (2,0)

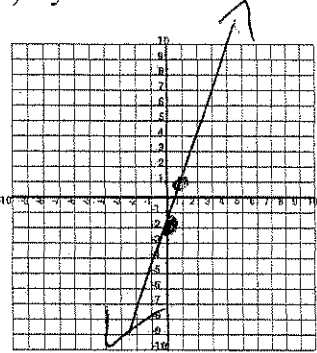
$$m = \frac{7-0}{-3-2} = \frac{-7}{5}$$

3) (4,-7) and (13,5)

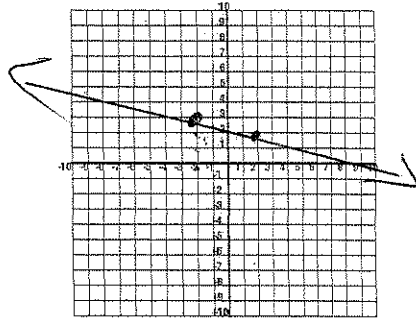
$$m = \frac{5-(-7)}{13-4} = \frac{12}{9} = \frac{4}{3}$$

Graph the following linear equations.

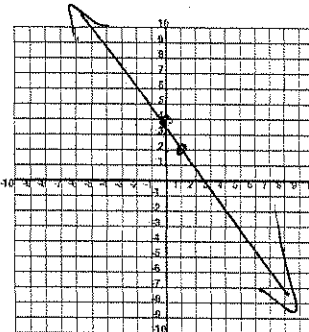
4) $y = 3x - 2$



5) Slope = $-\frac{1}{4}$, through (-2, 3)



6) $4x + 2y = 8$



$$2y = -4x + 8$$

$$y = -2x + 4$$

Write the equation for the following lines in slope-intercept form.

7) Slope = 3, y-intercept = -5

$$y = 3x - 5$$

8) Slope = $-\frac{2}{3}$, y-intercept = 13

$$y = -\frac{2}{3}x + 13$$

9) Slope = $\frac{1}{2}$, through point (6,7)

$$y = mx + b \quad 7 = \frac{1}{2}(6) + b$$

$$y = \frac{1}{2}x + 4 \quad b = 4$$

10) Slope = 3, through point (2,-6)

$$y = mx + b$$

$$-6 = 3(2) + b \quad b = -12$$

$$y = 3x - 12$$

11) Through points (4,1) and (6,4)

Done in class.

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

12) Through points (1,3) and (2,5)

$$y = mx + b$$

$$m = \frac{5-3}{2-1} = \frac{2}{1} = 2$$

$$3 = 2(1) + b \quad b = 1$$

$$y = 2x + 1$$

13) Parallel to $y = 2x - 4$

$$m = 2$$

y-intercept = -1

$$y = 2x - 1$$

14) Perpendicular to $y = -\frac{1}{2}x + 7$

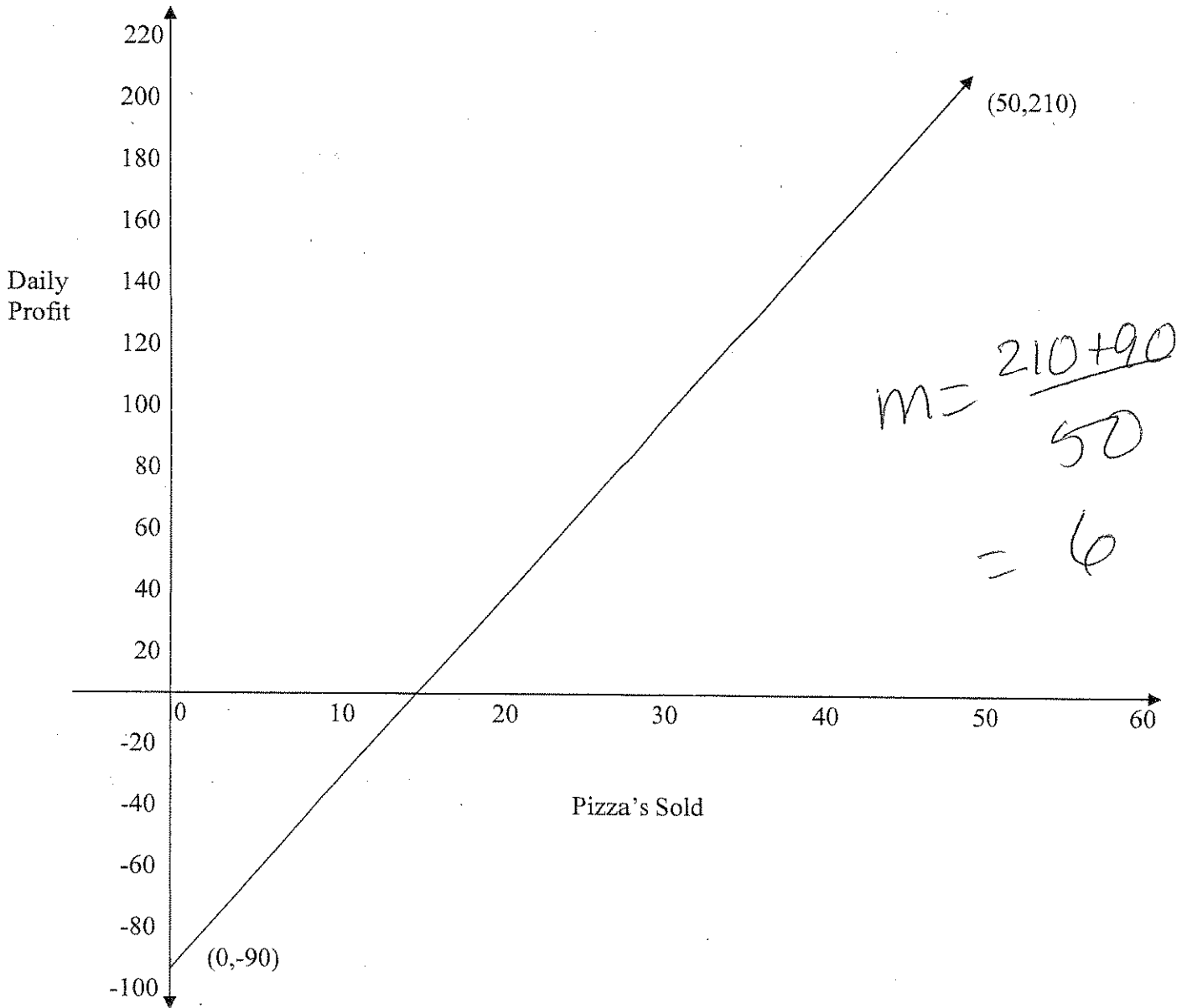
$$y = 2x + 1 \quad m_1 = 2$$

y-intercept = -1

$$y = 2x - 1$$

15)

Polly's Pizza Place



A) Write the equation for Polly's daily profit in slope-intercept form.

$$y = 6x - 90$$

B) Write the X and Y intercepts and describe their importance to the graph and Polly.

0 pizzas sold \$90 loss 15 sold \$0 profit

C) Give the slope and describe its importance to the graph and Polly.

\$6 \$6/pizza sold.

D) Use your equation to predict how much Polly will make if she sells 30, 40, and 60 pizzas in a day.

$$6(30) - 90 = 90 \quad 6(40) - 90 = 150$$

E) Why is it not important to continue the graph to the left of the Y-axis?

Negative pizzas sold makes no sense.