Section 2.3 – Linear Functuons   Name_____

Slope-intercept form: Point-Slope form:

Ex1)   Find the equation with the given point and slope: m = 2, point (0, -4)

Slope-intercept form: Point-Slope form:

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Ex2)   Find the equation with the given point and slope: m = $\frac{1}{2}$, point (-2, -4)

Slope-intercept form: Point-Slope form:

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Ex3)   Find the equation with the given points (1, -7) and (-2, -17)

Slope-intercept form: Point-Slope form:

Parallel:

Write the slope-intercept or point-slope equation of the line containing the specified point and parallel to the indicated line. Show all work:

1.   (-2, 5), x – 2y = 3   2.   (12, -4), -4x + 6y = -8

3.   (-3, 6), x = 3   4.   (5, -2), y = 4

Perpendicular:

Write the slope-intercept equation of the line containing the specified point and perpendicular to the indicated line. Show all work:

1.   (-2, 5), x – 2y = 3

2.   (12, -4), -4x + 6y = -8

3.   (-3, 6), x = 3

4.   (5, -2), y = 4

A piece of pottery is removed from a kiln and allowed to cool in a controlled environment. The temperature (in degrees Fahrenheit) of the pottery after it is removed from the kiln for various times (in minutes) is shown in the following table.

Time (min)	Temperature (°F)
15	2350
20	2300
30	2200
60	1900

(a) Find a linear model for the temperature of the pottery after t minutes.

(b) Explain the meaning of the slope of this line in the context of the problem.

(c) Assuming the temperature continues to decrease at the same rate, what will be the temperature of the pottery in 3 hours?