2.1-2.4 Review

**Graph the line that represents each linear equation.**

1. −5*x* + *y* = −10 2. 4*x* − 12*y* = −24 3.  4. 

5.  6.  7.  8. 

**What points represent the *x*- and *y*-intercepts of each equation?**

9. −8x + 12*y* = −144 10. 4*x* − 5*y* = 80

11. A high school football team scores a total of 42 points by scoring touchdowns
and field goals. Suppose each field goal is worth 3 points and each touchdown
is worth 7 points.

**a.** Let *x* represent the number of field goals and *y* represent the number of
touchdowns. Write an equation that models the total points scored in the game.

**b.** Identify and interpret the *x*- and *y*-intercepts.

**Write an equation for the line that passes through the given point and is parallel to the graph of the given equation.**

12. *y* = *x* + 19; (−9, 4) 13. 3*x* + 4*y* = 12; (−4, 7)
**Write an equation for the line that passes through the given point and is perpendicular to the graph of the given equation.**

14. *y* = −2*x* − 1; (2, −1) 15. *y* + 4 = (*x* − 2); (4, −2)

16. Gina purchased a new cell phone for $850 on a payment plan. 2 months after purchasing the phone the balance she owed was $485. Six months after purchasing the phone she owed $305.

a. Write an equation that models the balance *B* after *m* months.

b. How much was her down payment?

c. How much does Gina pay each month?

17. Find the equation of the line through  in
 a. point-slope form
 b. slope-intercept form
 c. standard form

18. Put  into standard form.

19. A car on the Tacoma Narrows Bridge can be modeled by the equation  . They want to build a second bridge parallel to it passing through the point  . Find the equation of the line that would model the new bridge.

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