Algebra II Worksheet #1 Unit 2 selected solutions page 1

For each of the following linear equations in two variables: (a) find the x and y intercepts, (b) write the equation in slope-intercept form, and (c) graph the equation.

1. $5x + 2y = 10$

(a) x intercept: 2 y intercept: 5

The x-intercept is the value of x when y = 0. Just let y = 0, and solve for x.

$$5x + 2(0) = 10$$
$$5x = 10$$
$$x = 2$$

The y-intercept is the value of y when x = 0. Just let x = 0, and solve for y.

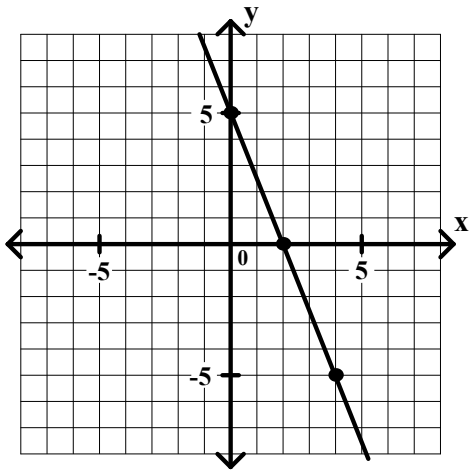
$$5(0) + 2y = 10$$
$$2x = 10$$
$$y = 5$$

(b) slope intercept equation: $y = \frac{-5}{2}x + 5$

To find the slope-intercept equation, just solve for y.

$$5x + 2y = 10$$
$$2y = -5x + 10$$
$$y = \frac{-5}{2}x + 5$$

(c)



Graph each of the following equations in the Cartesian coordinate plane.

8. $x - 3y = 9$

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

11. $x = -3$