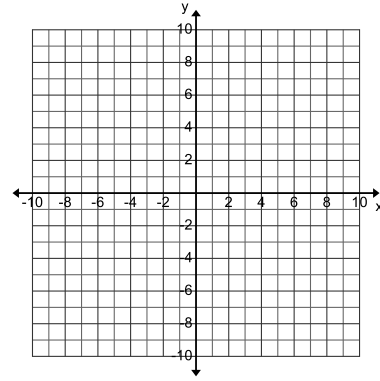


U6D2

**Warm up:**

Given the linear equation  $y = -2x + 5$ ,

- a) identify the slope and y-intercept
- b) graph



U6D2

Equation of a Line in Standard Form

The form of a linear equation that we have focused on so far is the slope y-intercept form:

Another form of a linear equation that is used is called the Standard Form. Standard form of a linear equation is:

- $A, B, C$  are \_\_\_\_\_ (not \_\_\_\_\_)
- $A$  &  $B$  are not both equal to \_\_\_\_\_
- The coefficient on the leading term (First term) is \_\_\_\_\_
- Right side of the equation equals \_\_\_\_\_

**Example 1:** Which equations are in standard form?

a)  $3x - 4y - 3 = 0$

b)  $y = 2x - 3$

c)  $2y + 5x - 7 = 0$

d)  $0 = 3x - y + 1$

e)  $x - 2 = 0$

f)  $y + \frac{7}{2} = 0$

g)  $-y + 5 = 0$

**Example 2:** Express each equation in  $y=mx+b$  form. State the slope and y-intercept:

a)  $4x + 6y + 8 = 0$

b)  $2x - 2y - 6 = 0$

**Example 3:**

Express each equation in Standard form:

a)  $y = 3x + 2$

b)  $y = -4x + 6$

c)  $y = \frac{5}{2}x - 1$

**Example 4:** The Tent-All Company rents tents to campers and charges according to the equation,  $10d - C + 50 = 0$ , where  $C$  is the cost in dollars to rent which depends on  $d$ , the number of days rented.

a) Express the equation in slope y-intercept form

b) Identify the fixed and the variable costs.

c) Graph the relation.

d) What is the rental cost if a tent is rented for 7 days?

