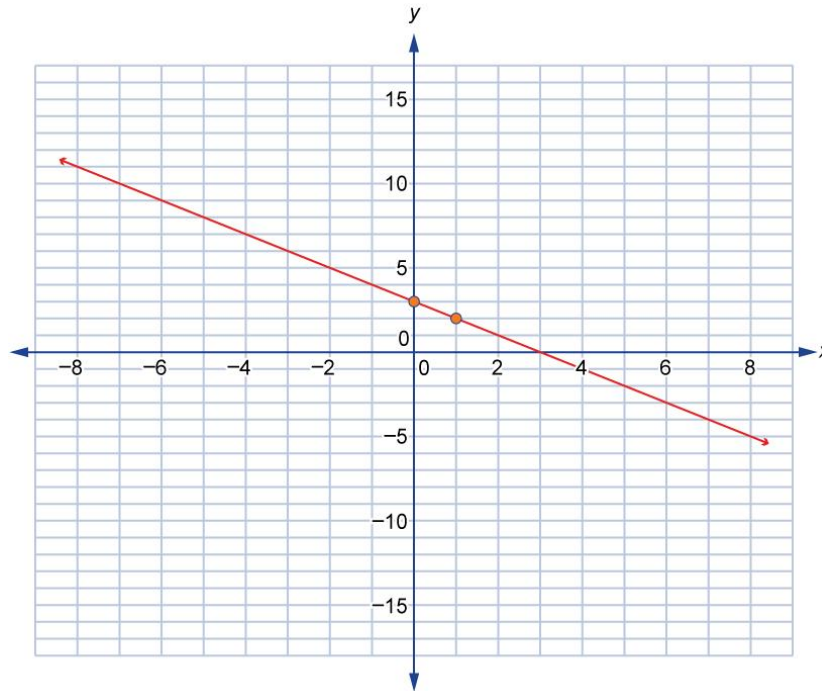


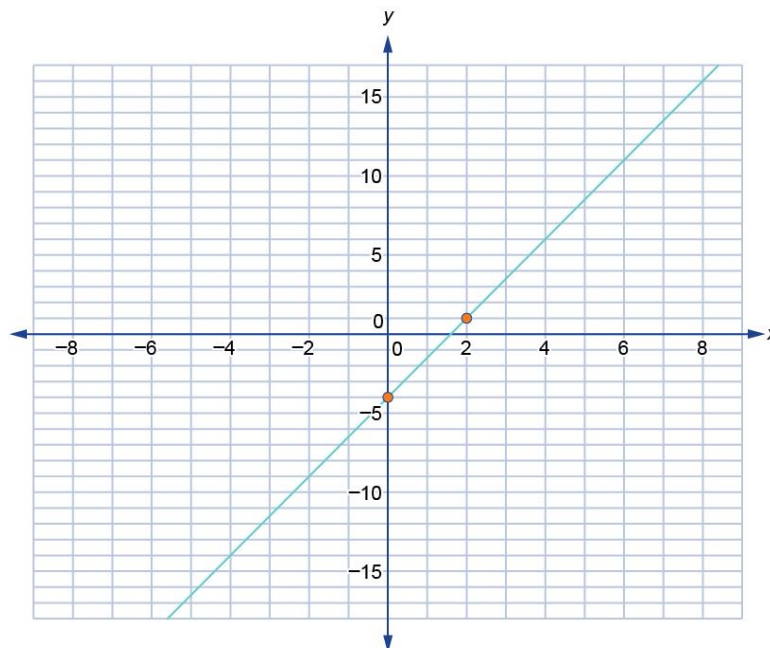
Module 5 Lesson 5 TT1 – 3 Possible Solutions

TT 1. *Foundations and Pre-calculus Mathematics 10* (Pearson), questions 7.b), 7.d), 7.e), and 18 on pages 362 to 364

7. **b)** Graph the y-intercept, $(0, 3)$. Next, find the next point using the slope. Move down 1 unit and right 1 unit to $(1, 2)$. Lastly, draw a straight line through the points.



- d)** Graph the y-intercept, $(0, -4)$. Next, find the next point using the slope. Move up 5 units and right 2 units to $(2, 1)$. Lastly, draw a straight line through the points.



e) Graph the V -intercept, $(0, 6000)$. Next, find the t -intercept, and graph it.

$$V = -100t + 6000$$

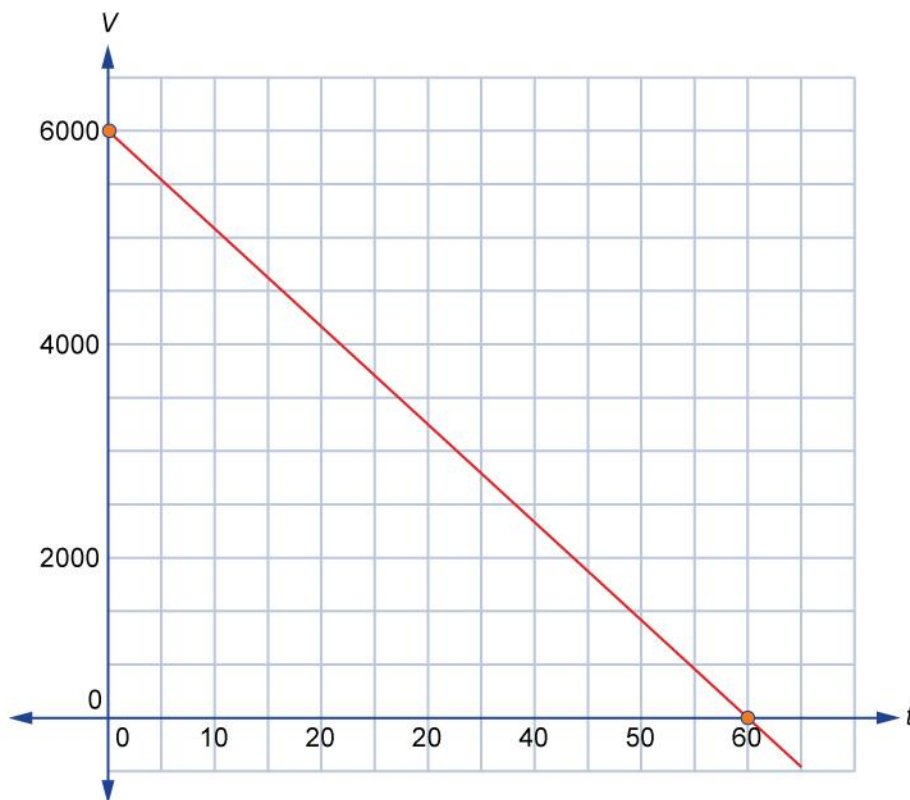
$$0 = -100t + 6000$$

$$100t = 6000$$

$$\frac{100t}{100} = \frac{6000}{100}$$

$$t = 60$$

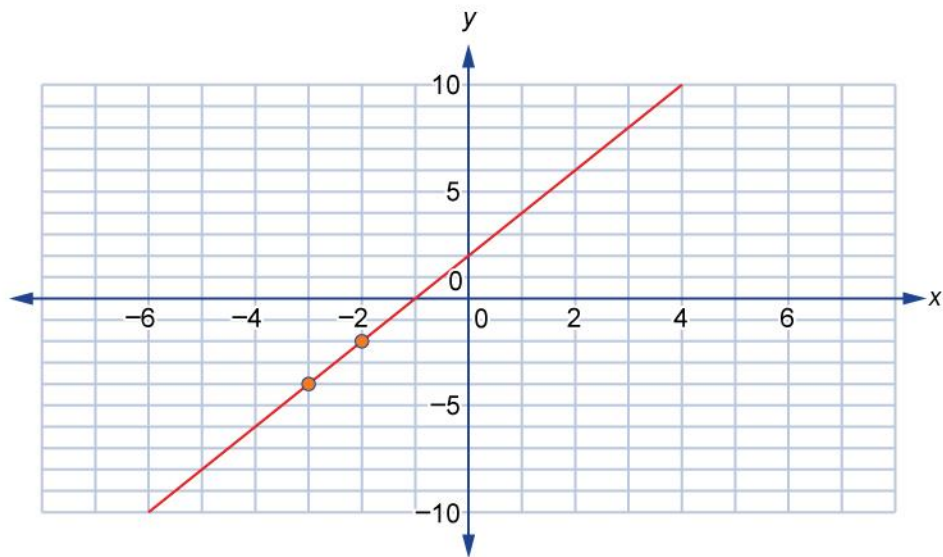
Lastly, draw a straight line through the two intercepts.



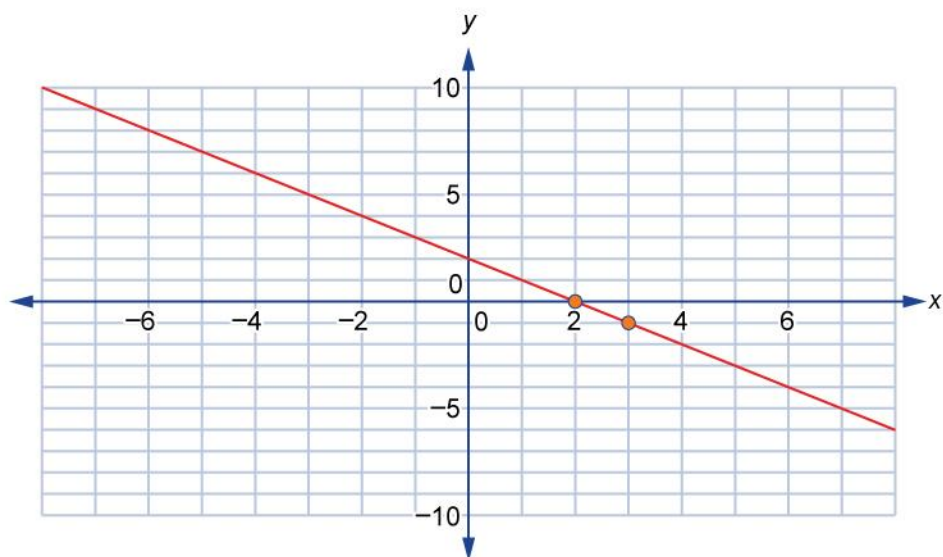
18. a) Graph C. The slope of the graph is 2, which matches the m -value of the equation.
- b) Graph A. The slope of the graph is 3, which matches the m -value of the equation.
- c) Graph D. This is the only graph with a negative slope and c) is the only equation with a negative m -value.
- d) Graph B. The slope of the graph is $\frac{1}{3}$, which matches the m -value of the equation.

TT 2. *Foundations and Pre-calculus Mathematics 10* (Pearson), questions 7.b), 7.d), 15.a), and 15.d) on pages 372 and 373

7. **b)** The graph has a slope of 2 and a point of $(-3, -4)$.



d) The graph has a slope of -1 and a point of $(2, 0)$.



15. Student answers will vary depending on their method of creating the graph. Sample answers based on the TI-83 series of calculators are shown.

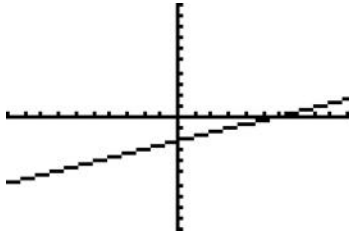
a) Instructions are as follows:

Step 1: Rearrange the equation so that y is isolated.

Step 2: Enter the equation into the calculator or other graphing software.

Step 3: Set your window to $x: [-10, 10, 1]$, $y: [-10, 10, 1]$.

Step 4: Select "Graph." The screenshot shows the finished graph from a TI-83 plus graphing calculator.



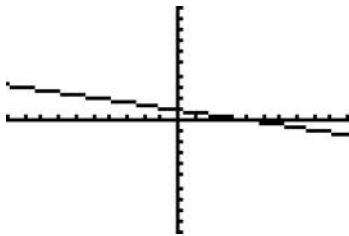
b) Instructions are as follows:

Step 1: Rearrange the equation so that y is isolated.

Step 2: Enter the equation into the calculator or other graphing software.

Step 3: Set your window to $x: [-10, 10, 1]$, $y: [-10, 10, 1]$.

Step 4: Select "Graph." The screenshot shows the finished graph from a TI-83 plus graphing calculator.



TT 3. *Foundations and Pre-calculus Mathematics 10* (Pearson), questions 14.b), 14.d), and 22 on pages 384 and 385

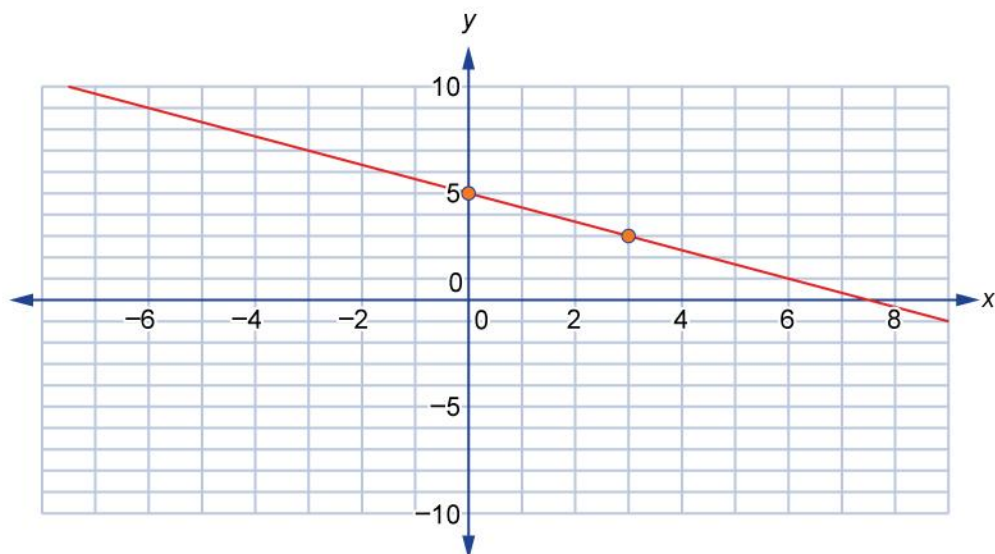
- 14. b)** The strategy used was to first convert the equation into slope-intercept form; then graph the y -intercept, and count the slope down 2 units and right 3 units to get the next point; then draw a straight line through the two points.

$$2x + 3y - 15 = 0$$

$$3y = -2x + 15$$

$$\frac{3y}{3} = \frac{-2x}{3} + \frac{15}{3}$$

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



- d) The strategy used was to find the x- and y-intercepts and graph them. Then draw a straight line through the two intercepts.

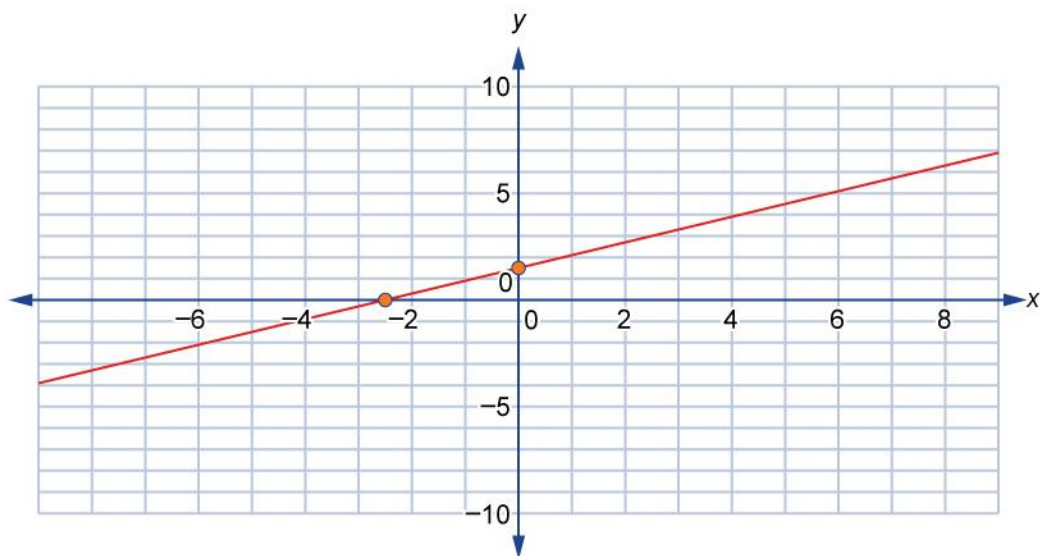
$$6x - 10y + 15 = 0$$

x-intercept ($y = 0$):

$$\begin{aligned} 6x - 10(0) + 15 &= 0 \\ 6x + 15 &= 0 \\ 6x &= -15 \\ \frac{6x}{6} &= \frac{-15}{6} \\ x &= -\frac{5}{2} \end{aligned}$$

y-intercept ($x = 0$):

$$\begin{aligned} 6(0) - 10y + 15 &= 0 \\ -10y + 15 &= 0 \\ -10y &= -15 \\ \frac{-10y}{-10} &= \frac{-15}{-10} \\ y &= \frac{3}{2} \end{aligned}$$



22. a) $2x + 3y - 6 = 0$

$$3y = -2x + 6$$

$$\frac{3y}{3} = \frac{-2x}{3} + \frac{6}{3}$$

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

← Graph B has a negative slope.

b) $2x - 3y + 6 = 0$

$$2x + 6 = 3y$$

$$\frac{3y}{3} = \frac{2x}{3} + \frac{6}{3}$$

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

← Graph A has a positive slope.