How to Graph Linear Equations

1. Identify the slope and the y-intercept.
2. Label the y-intercept on the y-axis.
3. Remeber that,
$$\text{slope} = \frac{\text{rise}}{\text{run}}.$$
Starting from the y-intercept go up by 'rise' units and go to the right by 'run' units. (Remeber that a negative 'rise' means go down and a negative 'run' means go left).
4. Label the point where you end up at.
5. Draw a straight line through the two points you have labelled.
6. Finish by labelling the graph and drawing the tip arrows.

Practice Problems:

Double check your answers by using the graphing website **Desmos**.(Google it)

Question 1. Graph the following linear equations.

(a) $y = \frac{2}{3}x + 11$

(b) $y = \frac{-2}{3}x$

(c) $3x - y = 4$

(d) $3x + 7y = 1$

(e) $y = -2x - 1$

(f) $y = -\frac{4}{5}x + 1$

Question 2. Determine the point of intersection of the following pairs of linear equations.

(a)
$$3x - y = 4$$
$$2x + 2y = 18.$$

(b)
$$x + y = 4$$
$$2x + 7y = 0.$$

(c)
$$9x + 3y = 21$$
$$y - 2x = 1.$$