\*Learning Target:

\*Critical Content:

Linear equation –

Standard form –

Constant –

\*Not a linear equation if:

**Determine if the following are linear equations. Write the equation in standard form.**1a) $y=4-3x$ 1b) $6x-xy=4$ 1c) $\frac{1}{3}y=-1$

Linear equations can be represented on a coordinate graph:

x-intercept –

y-intercept –

\*The graph of a linear equation has at most \_\_\_\_\_ x-intercept and \_\_\_\_\_\_\_ y-intercept.



Ex2) Find the x and y intercepts of the graph on the right.

Ex3) A swimming pool is being drained at a rate of 720 gallons per hour. The table shows the function relating the volume of water in a pool and the time in hours that the pool has been draining.
a) Find the x and y intercepts.

b) Describe what the intercepts mean in the situation.

\*The intercepts give us two points, we can then graph the line because 2 points make a line.
Ex4) Graph $2x+4y=16$ using the x and y intercepts.

2)Find y-intercept $\rightarrow x=$ \_\_\_\_

1)Find x-intercept $\rightarrow y=$ \_\_\_\_

\*We can also graph using the slope and the y-intercept! YOU KNOW HOW TO DO THIS!

Ex5) Graph $y=\frac{1}{3}x+2$

\*To graph in $y=mx+b$ form:

1)

2)

SLOPE: m = \_\_\_

Y-INTERCEPT: b = \_\_\_\_

Ex) Graph $2x-y=2$

\*First, solve for y.

m = \_\_\_

b = \_\_\_

Ex) Graph $y=3$ Ex) Graph $x=7$



HORIZONTAL EQUATIONS:

VERTICAL EQUATIONS:

Ex) Graph $y=-2$ Ex) Graph $x=-9$