\*Learning Target:

\*Critical Content:

Direct variation –

Constant of variation/constant of proportionality –

\*y=kx always passes through the \_\_\_\_\_\_\_\_\_\_\_. This means the x and y intercepts are \_\_\_\_\_\_\_and k is the \_\_\_\_\_\_\_\_\_\_\_.

Ex: Name the constant of variation for the following equations. Also, find the slope.
a) b)

k = \_\_\_\_\_\_

m = \_\_\_\_\_

k = \_\_\_\_\_\_

m = \_\_\_\_\_



Ex: Graph $y=-6x$

m = \_\_\_\_\_\_\_

b = \_\_\_\_\_\_\_

Ex: Write and solve a direct variation equation. Suppose y varies directly as x and y = 72 when x = 8.
a) Write a direct variation equation for y and x. b) Use the direct variation equation to find x when y = 63.

One of the most common applications of direct variation is the formula \_\_\_\_\_\_\_\_\_\_\_. \_\_\_\_\_\_\_\_\_ d varies \_\_\_\_\_\_\_ as the \_\_\_\_\_\_ t, and the \_\_\_\_\_\_ r is the \_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_.

Ex: The distance a jet travels varies directly as the number of hours it flies. A jet traveled 3420 miles in 6 hours.
a) Write a direct variation equation. b) Graph the equation

c) Estimate how many hours it will take for an airliner to fly 6500 miles.