



# Direct Variations

\*  $y = kx + 0$

If the y-int is zero then it's a direct variation

\* Direct Variation always go through origin (0,0)

\* The Chart is always proportional,  $\frac{y}{x} = \frac{y}{x}$

\* The constant of variation k (scale factor) is the slope  $k = \frac{y}{x}$ .

**Determine if each is a direct variation and find the constant of variation and write in  $y=kx$  form .**

Ex1 )  $y=2x$

Ex2)  $2x+2y = 3$

Ex3)  $8x + 2y = 0$

Ex4)  $3x - 3y = 12$

Ex5)  $15x + 5y = 30$

Ex6)

x	1	2	3	4	5
y	3	5	7	11	13

Ex7)

x	2	4	6	8	10
y	6	12	18	24	30

Write an equation of the line given that the line passes through the given points and is a direct variation

Ex8)  $x = 5$  and  $y = 2$

Ex9)  $x = -2$  and  $y = 4$