

## Notes #8 ~ Sect. 2.3: Direct Variation

Direct Variation is represented by a linear function defined by an equation of the form  $y = kx$ , where  $k$  cannot equal 0.

Constant of variation :  $k = \frac{y}{x}$

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Ex.1 : For each function, determine whether  $y$  varies directly with  $x$ . If so, find the constant of variation & write the equation.

a)

$x$	$y$
-1	3
2	-6
5	15

b)

$x$	$y$
7	14
9	18
-4	-8

Ex. 2: For each function, determine whether  $y$  varies directly with  $x$ . If so, find the constant of variation.

a)  $3y = 7x + 7$

b)  $5x = -2y$

Ex. 3: Suppose  $y$  varies directly with  $x$ , and  $y = 15$  when  $x = 27$ .  
Find  $y$  when  $x = 18$ .

Ex. 4: Write an equation for a direct variation with a graph that passes through each point.

a.  $(6, -3)$

b.  $(-4, 7)$