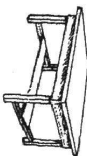


A Table



This is a way of organizing equivalent ratios.

To determine whether the ratios are proportional, simply divide $Y \div x$ to get the constant!

Example: (All ratios have a constant unit rate of 3:1)

X	2	3	5	10
Y	6	9	15	30

An Equation



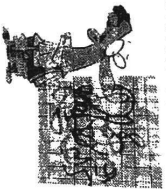
An equation of a proportional relationship (direct variation) is written in the form of $y = kx$.

K represents the _____, or _____

To get this constant (unit rate),

$$k = \frac{y}{x}$$

A Graph



A graph of a proportional relationship MUST:

- 1- _____
- 2- _____

You Try! Find the constant (unit rate):

X	3	4	11	20
Y	12	16	44	80

You Try! Find the constant (unit rate):

X	$\frac{1}{2}$	$\frac{3}{4}$	2	5
Y	2	3	8	20

Examples:

In the equation, $y = 8x$, the constant (unit rate) is 8.

In the equation $14 = k \cdot 2$, the constant (unit rate) is 7.

You Try! Find the constants!

$$y = \frac{1}{2}x \quad k = \underline{\hspace{2cm}}$$

$$36 = k \cdot 4 \quad k = \underline{\hspace{2cm}}$$

$$9 = k \cdot 18 \quad k = \underline{\hspace{2cm}}$$

Example: The constant below is 30 (miles per hour).

How do you get that?

1) Find y when $x=1$.

See the point (,).

---OR---

2) Find any point on the line, Divide $y \div x$.

ALL labeled points have a constant of 30!

