

Direct Variation

Directions - All the values in the table below vary directly. Find the constant of variation.

1. $x = 100$ and $y = 8$

$$\frac{y}{x} = \frac{8}{100}$$

$$k = \frac{8}{100}$$

2. $x = 50$ and $y = 4$

$$\frac{y}{x} = \frac{4}{50}$$

$$k = \frac{4}{50}$$

3. $x = 100$ and $y = 12$

$$\frac{y}{x} = \frac{12}{100}$$

$$k = \frac{12}{100}$$

4. A bank offers interest that varies directly with the amount of money. Complete the table below by writing the constant of variation in the blank and find the constant of variation.

4a

100	120	150	200
10	12	15	20

$$\frac{y}{x} = \frac{10}{100} = \frac{12}{120} = \frac{15}{150} = \frac{20}{200}$$

$$k = \frac{10}{100} = \frac{1}{10}$$

4b

100	120	150	200
10	12	15	20

$$\frac{y}{x} = \frac{10}{100} = \frac{12}{120} = \frac{15}{150} = \frac{20}{200}$$

$$k = \frac{10}{100} = \frac{1}{10}$$

5. The variables in the table below vary directly. Write the constant that relates the variables and find the constant variation in the blank.

10	15	20	30
10	15	20	30

$$\frac{y}{x} = \frac{10}{10} = \frac{15}{15} = \frac{20}{20} = \frac{30}{30}$$

$$k = 1$$

6. A car's relationship between the number of miles it drives and the amount of gas it uses is shown below.

$$y = 25x$$

7. The table below shows the relationship between the number of hours and the amount of money earned.

10	15	20	30
10	15	20	30

$$\frac{y}{x} = \frac{10}{10} = \frac{15}{15} = \frac{20}{20} = \frac{30}{30}$$

$$k = 1$$