

WRITING EQUATIONS FOR PROPORTIONAL RELATIONSHIPS: TABLES

Proportional relationships can be represented using an equation of the form $y = kx$, where k is the constant of proportionality.

Write an equation for the proportional relationship in the table below. First, find the constant of proportionality by calculating the ratio of y to x for each ordered pair in the table. Then, write the equation using the constant of proportionality, k , that you found.

x	3	4	5	6	7
y	18	24	30	36	42

Ratio of y to x $\frac{18}{3} = 6$ $\frac{24}{4} = 6$ $\frac{30}{5} = 6$ $\frac{36}{6} = 6$ $\frac{42}{7} = 6$

The constant of proportionality is 6. So, the equation is $y = 6x$.

Find the constant of proportionality. Make sure to simplify any fractions. Then write an equation to represent each proportional relationship.

x	1	2	3
y	3	6	9

Equation: $y = 3x$

x	4	6	8
y	2	3	4

Equation: $y = \frac{1}{2}x$

x	2	3	5
y	14	21	35

Equation: $y = 7x$

x	5	15	20
y	2	6	8

Equation: $y = \frac{2}{5}x$

x	6	9	15
y	2	3	5

Equation: $y = \frac{1}{3}x$

x	5	7	8
y	40	56	64

Equation: $y = 8x$