

Identify the Constant of Proportionality From Tables

In a proportional relationship, the **constant of proportionality** is the ratio of y to x .

To find the constant of proportionality from a table, calculate the ratio of y to x for each ordered pair in the table. Take a closer look at the table below.

x	y	Ratio of y to x
1	3	$\frac{3}{1} = 3$
2	6	$\frac{6}{2} = 3$
3	9	$\frac{9}{3} = 3$
6	18	$\frac{18}{6} = 3$

When simplified, the ratio for each pair of x - and y -values is 3. This means the relationship is proportional, and the constant of proportionality is 3.

If a relationship is not proportional, there is no constant of proportionality.



Find the ratios to determine whether each table represents a proportional relationship. If the relationship is proportional, write the constant of proportionality. Simplify any fractions.

x	y	Ratio of y to x
2	4	2
3	6	2
4	8	2
8	16	2

Is this relationship proportional? If so, write the constant of proportionality.

yes; 2

x	y	Ratio of y to x
1	4	4
2	5	$\frac{5}{2}$
3	6	2
5	8	$\frac{8}{5}$

Is this relationship proportional? If so, write the constant of proportionality.

no

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Determine if each table represents a proportional relationship. If the relationship is proportional, write the constant of proportionality. Simplify any fractions.

x	y
16	4
20	5
28	7
40	10

Is this relationship proportional? If so, write the constant of proportionality.

yes; $\frac{1}{4}$

x	y
1	2
3	4
5	6
11	12

Is this relationship proportional? If so, write the constant of proportionality.

no

Challenge yourself! Each table represents a proportional relationship. Determine the constant of proportionality. Then write the missing values.

x	y
3	15
4	20
5	25
6	30
7	35
8	40

Constant of proportionality: 5

x	y
4	2
8	4
10	5
14	7
18	9
20	10

Constant of proportionality: $\frac{1}{2}$