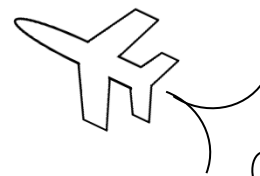


Math on the Fly!



NAME: _____ DATE: _____

Direct and Inverse Variation

Determine if each table represents a direct variation or inverse variation.
Find the constant of variation and write the equation of the relationship.

(The equation will be in the form $y = kx$ or $y = \frac{k}{x}$)

1.

x	y
2	6
5	15
7	21

2.

x	y
1	12
2	6
3	4

3.

x	y
8	4
10	5
14	7

4.

x	y
3	12
4	9
6	6

5.

x	y
0.6	3
1.5	7.5
1.8	9

6.

x	y
0.5	20
1.25	8
2.5	4

Solve each word problem below.

7.

y varies directly with x

If $y = 28$ when $x = 7$, what is y when $x = 9$?

8.

y varies inversely with x

If $y = 2$ when $x = 9$, what is x when $y = 6$?

9.

y varies directly with x

If $x = 5$ when $y = 45$, what is x when $y = 36$?

10.

y varies inversely with x

If $x = 3$ when $y = 10$, what is y when $x = 15$?

SOLUTIONS

1.

Direct: $k = 3$

Equation: $y = 3x$

2.

Inverse: $k = 12$

Equation: $y = \frac{12}{x}$ or $xy = 12$

3.

Direct: $k = 0.5$ or $1/2$

Equation: $y = 0.5x$ or $y = \frac{1}{2}x$

4.

Inverse: $k = 36$

Equation: $y = \frac{36}{x}$ or $xy = 36$

5.

Direct: $k = 5$

Equation: $y = 5x$

6.

Inverse: $k = 10$

Equation: $y = \frac{10}{x}$ or $xy = 10$

7.

Equation: $y = 4x$

Answer: $y = 36$

8.

Equation: $y = \frac{18}{x}$ or $xy = 18$

Answer: $x = 3$

9.

Equation: $y = 9x$

Answer: $x = 4$

10.

Equation: $y = \frac{30}{x}$ or $xy = 30$

Answer: $y = 2$