

# DIRECT AND INVERSE PROPORTION

## Ratio and Proportion

### Key Concepts

Variables are **directly proportional** when the **ratio is constant** between the quantities.

Variables are **inversely proportional** when **one quantity increases in proportion to the other decreasing**.

### Examples

Direct proportion:

Value of A	32	P	56	20	72
Value of B	20	30	35	R	45

Ratio constant:  $20 \div 32 = \frac{5}{8}$

From A to B we will multiply by  $\frac{5}{8}$ .

From B to A we will divide by  $\frac{5}{8}$ .

$$P = 30 \div \frac{5}{8} = 48$$

$$\times \frac{5}{8} = 12.5$$

$$R = 20$$

Inverse proportion:

Value of A	10	20	14	R	28
Value of B	14	P	10	70	5

$$P = 7$$

$$\times 5$$

$$R = 2$$



42 R8 R13

### Key Words

Direct  
Inverse  
Proportion  
Divide  
Multiply  
Constant

Complete each table:

1) Direct proportion

Value of A	5	P	22
Value of B	9	28.8	Q

2) Inverse

Value of A	4	P	18
Value of B	9	3	Q