Inverse Proportion

Maths

Mrs Dennett

Inverse Proportion

1. Y is inversely proportional to X
Given that Y = 4 when X = 3, find a formula for Y in terms of X

2. m is inversely proportional to n
When m = 10, n = 3
a) Find the value of m when n = 5

b) What happens to the value of n if you double the value of m?

3. y is inversely proportional to x^2
Given that y = 4 when x = 3,
a) Find a formula for y in terms of x.
b) Find y when x = 2
c) Find x when y = 1

4. h is inversely proportional to the square root of t.
When t = 4, h = 17.5
Find a formula for h in terms of t.

Answers

Inverse Proportion

1. Y is inversely proportional to X

Given that Y = 4 when X = 3, find a formula for Y in terms of X

$Y = \frac{12}{X}$

2. m is inversely proportional to n

When m = 10, n = 3

$m = \frac{30}{n}$

a) Find the value of m when n = 5

m = 6

b) What happens to the value of n if you double the value of m?

n would halve. n = 1.5

3. y is inversely proportional to x^2

Given that y = 4 when x = 3,

a) Find a formula for y in terms of x. $y = \frac{36}{x^2}$

b) Find y when x = 2 y = 9

c) Find x when y = 1 x = 6

4. h is inversely proportional to the square root of t.

When t = 4, h = 17.5

Find a formula for h in terms of t. $h = \frac{35}{\sqrt{t}}$