

Past Paper Questions – Direct & Inverse Proportion

Q1.

P is inversely proportional to the square of q .
When $q = 2$, $P = 12.8$

- (a) Find a formula for P in terms of q .

..... (3)

- (b) Find the value of P when $q = 8$

..... (1)

(Total for question = 4 marks)

Q2.

T is directly proportional to \sqrt{x}
 $T = 400$ when $x = 625$

- (a) Find a formula for T in terms of x .

..... (3)

- (b) Calculate the value of T when $x = 56.25$

..... (1)

(Total for question = 4 marks)

Q3.

D is directly proportional to t^2
When $t = 4$, $D = 8$

- (a) Find a formula for D in terms of t .

..... (3)

- (b) Find the positive value of t when $D = 50$

$t =$ (2)

(Total for Question is 5 marks)

Q4.

M is directly proportional to p^3
 $M = 128$ when $p = 8$

- (a) Find a formula for M in terms of p .

..... (3)

- (b) Find the value of M when $p = 5$

..... (1)

(Total for question = 4 marks)

Q5.

F is inversely proportional to the square of x .
 $F = 0.8$ when $x = 5$

- (a) Find a formula for F in terms of x .

..... (3)

- (b) Work out the positive value of x when $F = 320$

$x =$ (2)

(Total for Question is 5 marks)

Q6.

Q is inversely proportional to t^2
 $Q = 320$ when $t = 0.5$

- Find a formula for Q in terms of t

.....

(Total for question = 3 marks)

Q7.

A is directly proportional to x^2

$A = 480$ when $x = 5$

- Find the value of A when $x = 1.5$

.....

(Total for question = 3 marks)

Q8.

A , r and T are three variables.

A is proportional to T^2
 A is also proportional to r^3

$T = 47$ when $r = 0.25$

- Find r when $T = 365$

Give your answer correct to 3 significant figures.

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(Total for question = 4 marks)