

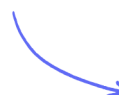
Calculator Questions

Proportion

Direct Proportion / Inverse Proportion

Medium (3 questions)	/9
Hard (3 questions)	/8
Very Hard (3 questions)	/10
Total Marks	/27

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Medium Questions

- 1 y is inversely proportional to x^2 .

When $x = 4$, $y = 7.5$.

Find y when $x = 5$.

$y =$

(3 marks)

- 2 y is inversely proportional to x^2 .

When $x = 4$, $y = 2$.

Find y when $x = \frac{1}{2}$.

$y =$

(3 marks)

- 3 (a) A ball falls d metres in t seconds. d is directly proportional to the square of t .

The ball falls 44.1 m in 3 seconds.

Find a formula for d in terms of t .

$d =$

(2 marks)

(b) Calculate the distance the ball falls in 2 seconds.

..... m

(1 mark)

Hard Questions

- 1 y is inversely proportional to the square root of x .

When $y = 7$, $x = 2.25$.

Write y in terms of x .

$y = \dots\dots\dots$

(2 marks)

- 2 p is directly proportional to $(q + 2)^2$.

When $q = 1$, $p = 1$.

Find p when $q = 10$.

$p = \dots\dots\dots$

(3 marks)

- 3 y is directly proportional to $(x - 1)^2$.

When $x = 5$, $y = 4$.

Find y when $x = 7$.

$y = \dots\dots\dots$

(3 marks)

Very Hard Questions

- 1 y is directly proportional to the cube root of $(x + 3)$.

When $x = 5$, $y = \frac{2}{3}$.

Find y when $x = 24$.

$y = \dots\dots\dots$

(3 marks)

- 2 (a) t is inversely proportional to the square of $(x + 1)$.

When $x = 2$, $t = 5$.

Write t in terms of x .

$t = \dots\dots\dots$

(2 marks)

- (b) When $t = 1.8$, find the positive value of x .

$x = \dots\dots\dots$

(2 marks)

- 3 y is inversely proportional to the square of $(x + 1)$.

$y = 0.875$ when $x = 1$.

Find y when $x = 4$.

$$y = \dots\dots\dots$$

(3 marks)