

Inverse proportion

Use it when y is inversely proportional to the square, the cube or the square root of x .

- 1 Statement**
Write it with $\propto$, 1 over and the power.

$$y \propto \frac{1}{x^2}$$

cube: 1 over x^3
square root: 1 over $\sqrt{x}$

- 2 Replace $\propto$ with $= k$**
Swap the $\propto$ for $= k$.
Keep the power.

$$y = \frac{k}{x^2}$$

- 3 Substitute**
Put in the pair of values.
Square the x value first.

$$\boxed{\text{y value}} = \frac{k}{\boxed{\text{x value}}^2}$$

cube it, or square root it, to match

- 4 Find k**
Multiply by the x value squared.

$$k = \boxed{\text{y value}} \times \boxed{\text{x value}}^2$$

cube: $\times$ the x value cubed
root: $\times$ its square root

- 5 Formula**
Write the formula with k in.

$$\boxed{y = \frac{k}{x^2}}$$

k as a number

- 6 Use it**
Put in the new value.
Square it first.

$$y = \frac{k}{\boxed{\text{new } x}^2}$$

finding x ? x^2 is k divided by y , then square root

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