

Proportionality

Syllabus tracker [Open it online](#)

Name: _____

Date: _____

Tick one circle for each statement — on screen (click) or with a pen. Then try the quick checks: write your answer in the box, check it against the answers at the end, and tick “right” when you got it.

Direct proportion

$y \propto x$, $y \propto x^2$, $y \propto \sqrt{x}$ and similar.

	Don't know	Shaky	Got it
I can write and use a direct proportion formula.	☐	☐	☐
I can use direct proportion to a square.	☐	☐	☐
I can use direct proportion to a square root or cube root.	☐	☐	☐

Inverse proportion

$y \propto 1/x$, $y \propto 1/x^2$ and similar, and how a change in x changes y .

	Don't know	Shaky	Got it
I can write and use an inverse proportion formula.	☐	☐	☐
I can use inverse proportion to a square.	☐	☐	☐
I can recognise the type of proportion from how the values change.	☐	☐	☐
I can work out the effect of changing x .	☐	☐	☐

Quick checks

One quick question per statement. Answer in the box, then check the answers at the end.

1. y is directly proportional to x . When $x = 4$, $y = 28$. Find y when $x = 7$.

Answer: _____ ☐ I got it right

2. $y \propto x^2$. When $x = 3$, $y = 18$. Find y when $x = 5$.

Answer: _____ ☐ I got it right

3. $y \propto \sqrt{x}$. When $x = 9$, $y = 12$. Find y when $x = 25$.

Answer: _____ ☐ I got it right

4. y is inversely proportional to x . When $x = 5$, $y = 8$. Find y when $x = 10$.

Answer: _____ ☐ I got it right

5. $y \propto 1/x^2$. When $x = 2$, $y = 9$. Find y when $x = 3$.

Answer: _____ ☐ I got it right

6. Doubling x halves y . What is the relationship?

A $y \propto x$ B $y \propto 1/x$ C $y \propto x^2$ D $y \propto 1/x^2$

Answer: _____ ☐ I got it right

7. $y \propto x^3$. If x is doubled, y is multiplied by what number?

Answer: _____ ☐ I got it right

Answers

Try every question first, then check.

1. 49

2. 50

3. 20

4. 4

5. 4

6. B: $y \propto 1/x$

7. 8