Exponential Growth And Decay

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.

Growth

Multipliers greater than 1 applied again and again.

	Don't know	Shaky	Got it
I can write the multiplier for a percentage increase.	○	○	○
I can use a growth multiplier over several years.	○	○	○

Decay

Multipliers less than 1: depreciation and decay; working backwards.

	Don't know	Shaky	Got it
I can use a decay multiplier.	○	○	○
I can work backwards to the starting value.	○	○	○

Finding the time or the rate

How many years until a target, and the percentage rate from two values.

	Don't know	Shaky	Got it
I can find how many whole periods it takes to pass a value.	○	○	○
I can find the percentage rate from two values.	○	○	○

Quick checks

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

1. What is the yearly multiplier for growth of 6%?
A 0.06 **B** 1.6 **C** 1.06 **D** 0.94

Answer: _____ ☐ I got it right

2. A population of 5000 grows by 4% per year. What is it after 2 years?

Answer: _____ ☐ I got it right

3. A car worth $12 000 loses 15% of its value each year. What is it worth after 2 years?

Answer: _____ ☐ I got it right

4. After falling 10% a year for 2 years, a value is $810. What was it at the start?

Answer: _____ ☐ I got it right

5. Bacteria double every hour. Starting with 300, after how many whole hours are there more than 10 000?

Answer: _____ ☐ I got it right

6. A value grows from 400 to 484 in 2 years at a constant percentage rate. What is the rate in %?

Answer: _____ ☐ I got it right

Answers

Try every question first, then check.

1. C: 1.06
2. 5408
3. 8670
4. 1000
5. 6
6. 10