Exponential graphs and constant percentage change

6 questions | 13 marks

Equivalent correct methods earn the corresponding marks.

1. Write the multiplier for 7% growth. [2 marks]

$1 + 0.07 = 1.07$.

Answer: 1.07.

2. Write the multiplier for 15% decay. [2 marks]

$1 - 0.15 = 0.85$.

Answer: 0.85.

3. Values are 50, 60, 72, 86.4 at equal steps. Find factor and percentage change. [2 marks]

Every consecutive ratio is 1.2.

The excess above 1 is 0.2.

Answer: Factor 1.2; 20% growth.

4. Evaluate $300(1.1)^2$. [2 marks]

$1.1^2 = 1.21$; multiply by 300.

Answer: 363.

5. Evaluate $500(0.9)^3$. [2 marks]

$0.9^3 = 0.729$; multiply by 500.

Answer: 364.5.

6. Explain why 20, 25, 30, 35 is not exponential with one constant factor. [3 marks]

Ratios are 1.25, 1.2 and about 1.1667.

Its constant difference 5 instead indicates linear change.

Answer: Its consecutive ratios differ.