

1. Table: 5, 8, 11, 14. Linear or exponential?

+3 each time

Answer: linear ($d = 3$)

2. Table: 5, 10, 20, 40. Linear or exponential?

x2 each time

Answer: exponential ($b = 2$)

3. 'By \$15 each month' - linear or exponential?

Fixed amount added

Answer: linear

4. 'By 15% each month' - linear or exponential? (Trainer echo - June 2025 Q3!)

Fixed PERCENT = multiplier

Answer: exponential

5. Table: 100, 90, 81, 72.9. Which type? Find the pattern.

$90/100 = 0.9$ each step

Answer: exponential decay, $b = 0.9$

6. Table: 40, 34, 28, 22. Which type?

-6 each time

Answer: linear ($d = -6$)

7. Write the rule for 5, 8, 11, 14 (start $x = 0$).

Start 5, add 3

Answer: $y = 3x + 5$

8. Write the rule for 5, 10, 20, 40 (start $x = 0$).

Start 5, double

Answer: $y = 5(2)^x$

9. Job A: \$40,000 + \$2,000 raise yearly. Job B: \$40,000 + 4% raise yearly. Which pays more in year 10, roughly?

A: $40000 + 2000(10) = 60,000$

B: $40000 \times 1.04^{10} = 59,210$

Answer: A barely - but B wins soon after

10. A table shows 3, 6, 12, 21. Prove it is NEITHER linear nor exponential. ★ challenge

Diffs: 3, 6, 9 - not constant

Ratios: 2, 2, 1.75 - not constant

Answer: fails both tests