

1. 3, 6, 12, 24: find r .

$$6/3$$

Answer: $r = 2$

2. Same sequence: next two terms?

$$24 \times 2, \text{ then } \times 2$$

Answer: 48, 96

3. 81, 27, 9, ...: find r .

$$27/81$$

Answer: $r = 1/3$

4. $a_1 = 5$, $r = 3$. Find a_4 .

$$5, 15, 45, 135$$

Answer: 135

5. $a_1 = -2$, $r = -3$. Find a_4 . (Trainer echo - Jan 2026 Q24!)

$$-2, 6, -18, 54$$

Answer: 54

6. Write the formula for 4, 8, 16, ...

$$a_1 = 4, r = 2$$

Answer: $a_n = 4(2)^{(n-1)}$

7. $a_n = 2(5)^{(n-1)}$. Find a_3 .

$$2 \times 25$$

Answer: 50

8. Is 2, 6, 18, 54 geometric or arithmetic?

$$\times 3 \text{ each step}$$

Answer: geometric, $r = 3$

9. $a_1 = 5$, $r = 3$. Find a_8 . (Trainer echo - Aug 2025 Q29!) ★ challenge

$$5 \times 3^7 = 5 \times 2187$$

Answer: 10,935

10. A geometric sequence has $a_2 = 12$ and $a_5 = 96$. Find r and a_1 . ★ challenge

$$3 \text{ steps: } 96/12 = r^3 = 8$$

$$r = 2; a_1 = 12/2$$

Answer: $r = 2$, $a_1 = 6$