

6-2d Geometric Sequences (ver1)_hw

Find the common ratio and determine if the sequence is geometric.

If it is, find the next three terms in the sequence.

1) 1, 2, 4, 8, ...

2) 3, -6, 12, -24, ...

3) -3, 9, -27, 81, ...

4) -2, -6, -18, -54, ...

5) -1, -4, -16, -64, ...

6) 10, 6, 4, 3, ...

7) 3, -15, 75, -375, ...

8) 3, 18, 108, 648, ...

9) 4, 20, 100, 500, ...

10) -3, 12, -48, 192, ...

11) -22, -10, -4, -1, ...

12) -2, -10, -50, -250, ...

13) 40, 20, 10, 5, ...

14) -81, -27, -9, -3, ...

Answers to 6-2d Geometric Sequences (ver1)_hw

- 1) Common Ratio: $r = 2$
Yes, geometric.
Next 3 terms: 16, 32, 64
- 2) Common Ratio: $r = -2$
Yes, geometric.
Next 3 terms: 48, -96, 192
- 3) Common Ratio: $r = -3$
Yes, geometric.
Next 3 terms: -243, 729, -2187
- 4) Common Ratio: $r = 3$
Yes, geometric.
Next 3 terms: -162, -486, -1458
- 5) Common Ratio: $r = 4$
Yes, geometric.
Next 3 terms: -256, -1024, -4096
- 6) Not geometric
- 7) Common Ratio: $r = -5$
Yes, geometric.
Next 3 terms: 1875, -9375, 46875
- 8) Common Ratio: $r = 6$
Yes, geometric.
Next 3 terms: 3888, 23328, 139968
- 9) Common Ratio: $r = 5$
Yes, geometric.
Next 3 terms: 2500, 12500, 62500
- 10) Common Ratio: $r = -4$
Yes, geometric.
Next 3 terms: -768, 3072, -12288
- 11) Not geometric
- 12) Common Ratio: $r = 5$
Yes, geometric.
Next 3 terms: -1250, -6250, -31250
- 13) Common Ratio: $r = \frac{1}{2}$
Yes, geometric.
Next 3 terms: $\frac{5}{2}, \frac{5}{4}, \frac{5}{8}$
- 14) Common Ratio: $r = \frac{1}{3}$
Yes, geometric.
Next 3 terms: -1, $-\frac{1}{3}, -\frac{1}{9}$