ALGEBRA 1 · CLASSWORK · ADVANCED

Identify Arithmetic and Geometric Sequences

SCORE / 25

01 Part A · Practice

In an arithmetic sequence you add the same number d; in a geometric sequence you multiply by the same number r, the common ratio.

EXAMPLE

Classify 3, 12, 48, 192, ...

1. Differences: 9, 36, 144 (not equal).
2. Ratios: $12 \div 3 = 4$, $48 \div 12 = 4$, $192 \div 48 = 4$.
3. Geometric with $r = 4$.

1 ●○○ Find the common ratio of the geometric sequence $14,\ 42,\ 126,\ 378,\ \ldots$

2 ●○○ Is the sequence arithmetic, geometric, or neither? $-8,\ -12,\ -18,\ -27,\ \ldots$

3 ●○○ Find the missing term of the geometric sequence $12,\ 60,\ 300,\ ___,\ 7500,\ \ldots$

4 ●○○ Find the next two terms of the geometric sequence $243,\ 81,\ 27,\ 9,\ \ldots$

5 ●○○ Is the sequence arithmetic, geometric, or neither? $24,\ 36,\ 48,\ 60,\ \ldots$

6 ●○○ Find the common ratio of the geometric sequence $15,\ -30,\ 60,\ -120,\ \ldots$

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Preview - the full worksheet and its answer key are at primeworksheet.com