Geometric Sequences

Problems about geometric (and other) sequences.

Problem 1 *A sequence has first two terms* $1, 2, \ldots$. *What type of sequence is this?*

Multiple Choice:

(a) *An arithmetic sequence.*

(b) *A geometric sequence.*

(c) *A quadratic sequence.*

(d) *It is impossible to tell.* ✓

Hint: *If we do not know the rule for generating the terms of this sequence, can we be sure we know the next term?*

Problem 2 *Assume the sequence below is a geometric sequence. Fill in the blanks.*

$$\boxed{3}, 6, 12, \boxed{24}, \boxed{48}, \boxed{96}, \boxed{192}, \ldots$$

Problem 3 *Assume the sequence below is a geometric sequence. Fill in the blanks.*

$$\ldots, \boxed{-4}, 6, \boxed{-9}, \boxed{13.5}, -20.25, \boxed{30.375}, \boxed{-45.5625}, \ldots$$

Problem 4 *Assume the sequence below is a geometric sequence. Fill in the blanks.*

$$\ldots, \boxed{16(0.75)^{(-0.5)}}, \boxed{16(0.75)^{(-0.25)}}, 16, \boxed{16(0.75)^{(0.25)}}, \boxed{16(0.75)^{(0.5)}}, \boxed{16(0.75)^{(0.75)}}, 12, \ldots$$

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