

8.5 Practice 2

Given the recursive formula for an arithmetic sequence find the first five terms.

$$1) \begin{aligned} a_n &= a_{n-1} + 4 \\ a_1 &= 40 \end{aligned}$$

Given the recursive formula for a geometric sequence find the first five terms.

$$2) \begin{aligned} a_n &= a_{n-1} \cdot -3 \\ a_1 &= 1 \end{aligned}$$

Find the recursive formula.

$$3) 6, 12, 18, 24, \dots$$

$$4) 1, -3, 9, -27, \dots$$

Given the explicit formula for an arithmetic sequence find the recursive formula.

$$5) a_n = -7 - 9n$$

$$6) a_n = -8 + 20n$$

Given the explicit formula for a geometric sequence find the recursive formula.

$$7) a_n = 3 \cdot 4^{n-1}$$

$$8) a_n = -4 \cdot 5^{n-1}$$

Given the recursive formula for an arithmetic sequence find the term named in the problem and the explicit formula.

$$9) \begin{aligned} a_n &= a_{n-1} - 2 \\ a_1 &= 1 \\ \text{Find } a_{39} \end{aligned}$$

$$10) \begin{aligned} a_n &= a_{n-1} - 5 \\ a_1 &= -3 \\ \text{Find } a_{30} \end{aligned}$$

Given the recursive formula for a geometric sequence find the term named in the problem and the explicit formula.

$$11) \begin{aligned} a_n &= a_{n-1} \cdot -2 \\ a_1 &= 3 \\ \text{Find } a_{12} \end{aligned}$$

$$12) \begin{aligned} a_n &= a_{n-1} \cdot -3 \\ a_1 &= -4 \\ \text{Find } a_{11} \end{aligned}$$