
Assignment

Date _____ Period _____

Find the common difference, the 52nd term, the explicit formula, and the recursive formula.

1) $-28, -20, -12, -4, \dots$

2) $29, -71, -171, -271, \dots$

Find the common ratio, the 8th term, the explicit formula, and the recursive formula.

3) $4, -16, 64, -256, \dots$

4) $-2, 6, -18, 54, \dots$

Find the common difference, the 52nd term, the explicit formula, and the recursive formula.

5) $-8, -17, -26, -35, \dots$

6) $-33, -25, -17, -9, \dots$

Determine if the sequence is geometric. If it is, find the common ratio, the 8th term, the explicit formula, and the recursive formula.

7) $3, 6, 12, 24, \dots$

8) $2, 4, 8, 16, \dots$

Find the recursive formula.

9) $31, 25, 19, 13, \dots$

A) $a_n = a_{n-1} - 6$
 $a_1 = 13$

B) $a_n = a_{n-1} - 6$
 $a_1 = 19$

C) $a_n = a_{n-1} - 6$
 $a_1 = 31$

D) $a_n = a_{n-1} - 6$
 $a_1 = 25$

10) $19, 11, 3, -5, \dots$

A) $a_n = a_{n-1} + 8$
 $a_1 = 19$

B) $a_n = a_{n-1} + 10$
 $a_1 = 29$

C) $a_n = a_{n-1} + 10$
 $a_1 = 19$

D) $a_n = a_{n-1} - 8$
 $a_1 = 19$

Find the explicit formula.

11) $-1, 5, -25, 125, \dots$

- A) $a_n = -5^{n-1}$
- B) $a_n = 5^{n-1}$
- C) $a_n = -2 \cdot 5^{n-1}$
- D) $a_n = -(-5)^{n-1}$

12) $2, -12, 72, -432, \dots$

- A) $a_n = 2 \cdot (-6)^{n-1}$
- B) $a_n = \frac{2}{5} \cdot 5^{n-1}$
- C) $a_n = 2 \cdot 5^{n-1}$
- D) $a_n = 5^{n-1}$

Find the term named in the problem.

13) $-13, -33, -53, -73, \dots$

Find a_{32}

- A) $a_{32} = -634$
- B) $a_{32} = -674$
- C) $a_{32} = -633$
- D) $a_{32} = -654$

14) $-37, 163, 363, 563, \dots$

Find a_{31}

- A) $a_{31} = 5933$
- B) $a_{31} = 6023$
- C) $a_{31} = 5963$
- D) $a_{31} = 5993$

Find the 8th term.

15) $-2, -12, -72, -432, \dots$

- A) $a_8 = -\frac{78125}{3}$
- B) $a_8 = -93312$
- C) $a_8 = -559872$
- D) $a_8 = 729$

16) $-1, 4, -16, 64, \dots$

- A) $a_8 = 729$
- B) $a_8 = 6561$
- C) $a_8 = 16384$
- D) $a_8 = 2187$