

AA2 Extra Practice #4

1. Write the first 4 terms of the sequence.

a. $a_n = 18 + 5n$

b. $a_n = 3a_{n-1} - 2; a_1 = 4$

2. State whether each sequence is arithmetic or geometric. Give d if arithmetic and r if geometric.

a. $\frac{4}{3}, 1, \frac{2}{3}, \frac{1}{3}, \dots$

b. $-21, 63, -189, 567, \dots$

3. Write a recursive formula for the n^{th} term of the sequence.

a. $3, 8, 13, 18, \dots$

b. $4, -8, 16, -32, \dots$

4. Write an explicit formula for the n^{th} term of the sequence.

a. $18, 11, 4, -3, \dots$

b. $405, 135, 45, 15, \dots$

5. Find the 27th term of the arithmetic sequence in which $a_{10} = 61$ and $a_{19} = 124$.

6. Find the 8th term of the geometric sequence in which $a_1 = 64$ and $a_4 = 1$.

7. Find the 10th term of the sequence.

a. $35, 70, 140, 280, \dots$

b. $4.2, 8.2, 12.2, 16.2, \dots$

8. Find the sum of each finite series.

a. $\sum_{n=1}^6 2n + 11$

b. $\sum_{n=1}^5 5(2)^n$

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1. a) 23,28,33,38

b) 4, 10, 28, 82

2. a) arithmetic; $d = -\frac{1}{3}$

b) geometric; $r = -3$

3. a) $a_n = a_{n-1} + 5$; $a_1 = 3$

b) $a_n = -2a_{n-1}$; $a_1 = 4$

4. a) $a_n = -7n + 25$

b) $a_n = 405\left(\frac{1}{3}\right)^{n-1}$

5. 180

6. $\frac{1}{256}$

7. a) 17920

b) 40.2

8. a) 108

b) 310

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