Bellwork Alg 2 Monday, September 9, 2019

1. Write both the explicit and recursive formulas for each sequence.

a) $23, 24, 45, 56, \ldots$

Explicit:

Recursive:

b) $-6, 18, -54, 162, \ldots$

Explicit:

Recursive:

2. Write the explicit formula for this sequence: $9, 16, 25, 36, \ldots$

3. Write the recursive formula for this sequence: $50, 52, 55, 59, 64, \ldots$

ANSWERS

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1. Write both the explicit and recursive formulas for each sequence.

a) $23, 34, 45, 56, \ldots$ ARITHMETIC $d = 11$

Explicit:

$t_n = 23 + 11(n-1)$

Recursive:

$t_1 = 23$

$t_n = t_{n-1} + 11$

b) $-6, 18, -54, 162, \ldots$ GEOMETRIC $r = -3$

Explicit:

$t_n = -6 \cdot (-3)^{n-1}$

Recursive:

$t_1 = -6$

$t_n = t_{n-1} \cdot (-3)$

2. Write the explicit formula for this sequence: $9, 16, 25, 36, \ldots$

$3^2, 4^2, 5^2, 6^2, \ldots$

$n = 1 \quad 2 \quad 3 \quad 4$

$t_n = (n+2)^2$

3. Write the recursive formula for this sequence: $50, 52, 55, 59, 64, \ldots$

$+2 \quad +3 \quad +4 \quad +5$

$t_1 = 50$

$t_n = t_{n-1} + n$

2nd term $= t_1 + 2$

3rd term $= t_2 + 3$

4th term $= t_3 + 4$

5th term $= t_4 + 5$