Bellwork Alg 2 Tuesday, September 3, 2019

1. Write the explicit formula for each sequence and state the 40th term.

a) $9, 18, 26, 72, \ldots$

Formula:

40th term:

b) $-11, -4, 3, 10, \ldots$

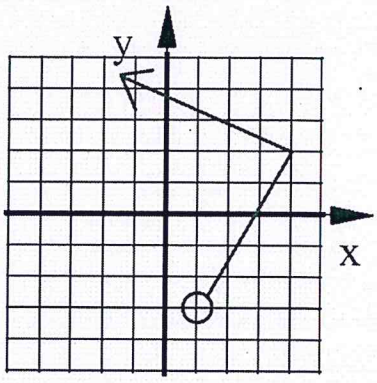
Formula:

40th term:

2. State the Domain and Range of each relation.

a) This set of points: $(5,1), (-2,7), (1,-6), (-2,3)$

b) Use this graph.



Bellwork Alg 2 Tuesday, September 3, 2019

ANSWERS

1. Write the explicit formula for each sequence and state the 40th term.

a) $9, 18, 36, 72, \ldots$

×2 ×2 ×2

Geometric Sequence

Common Ratio: $r = 2$

Formula:

$t_n = 9 \cdot 2^{n-1}$

40th term:

$t_{40} = 9 \cdot 2^{40-1}$

$= 9 \cdot 2^{39}$

$t_{40} = 4.95 \times 10^{12}$

b) $-11, -4, 3, 10, \ldots$

+7 +7 +7

ARITHMETIC SEQUENCE

Common Difference: $d = 7$

Formula:

$t_n = -11 + 7(n-1)$

40th term:

$t_{40} = -11 + 7(40-1)$

$= -11 + 7(39)$

$t_{40} = 262$

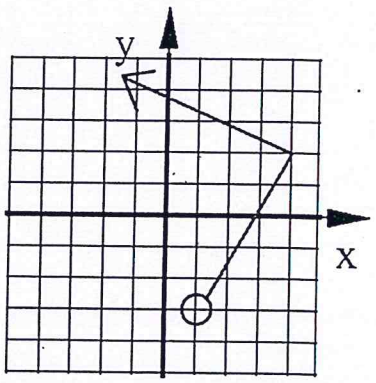
2. State the Domain and Range of each relation.

a) This set of points: $(5,1), (-2,7), (1,-6), (-2,3)$

Domain: $\{-2, 1, 5\}$

Range: $\{-6, 1, 3, 7\}$

b) Use this graph.



Domain: $x \leq 4$

Range: $y > -3$