

Bellwork Alg 2B Monday, December 18, 2017

Use the given formula to find the 4th, 5th, and 6th terms of each sequence.

1. $a_n = 2(n + 1)^2 - 3$

2. $a_1 = 10$

$$a_n = 3(a_{n-1} - 4) + 2$$

Write a recursive formula for each sequence.

3. ~~16~~, 36, 54, 81...
24

4. -12, -16, -20, -24...

Write an explicit formula for each sequence.

5. 8, 12, 16, 20...

6. 9, 16, 25, 36...

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Bellwork Hrs 1-3

$$(1) \quad a_n = 2(n+1)^2 - 3$$

$$a_4 = 2(4+1)^2 - 3 = 47$$

$$a_5 = 2(5+1)^2 - 3 = 69$$

$$a_6 = 2(6+1)^2 - 3 = 95$$

$$(3) \quad \overset{24}{\cancel{12}}, 36, 54, 81, \dots$$

$$a_1 = 24$$

$$a_n = (a_{n-1})(1.5)$$

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

$$(5) \quad \underset{2(4)}{8}, \underset{3(4)}{12}, \underset{4(4)}{16}, \underset{5(4)}{20}, \dots$$

$$a_n = 4(n+1)$$

$$(2) \quad a_1 = 10$$

$$a_2 = 3(10-4) + 2 = 20$$

$$a_3 = 3(20-4) + 2 = 50$$

$$a_4 = 3(50-4) + 2 = 140$$

$$a_5 = 3(140-4) + 2 = 410$$

$$a_6 = 3(410-4) + 2 = 1228$$

$$(4) \quad -12, -16, -20, -24, \dots$$

$$a_1 = -12$$

$$a_n = (a_{n-1}) - 4$$

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

$$(6) \quad \underset{(3)^2}{9}, \underset{(4)^2}{16}, \underset{(5)^2}{25}, \underset{(6)^2}{36}, \dots$$

$$a_n = (n+2)^2$$