

**Inductive Reasoning:**

**Sequence:**

**Term:**

[EX1] 3, 7, 12, -10, 9, 11, 36, -48, 117, 23

$a_5 =$

$a_2 =$

$a_{10} =$

$a_{12} =$

[EX2]  $a_n = 2n^2 - 5n + 1$

List the first three terms of the sequence:

[EX3] Given the sequence 3, 4, 5, 6, 7, 8, ...  
find a likely general rule  $a_n = ??$

[EX4] Given the sequence 97, 98, 99, 100, 101, 102, ...  
find a likely general rule  $a_n = ??$

[EX5] Given the sequence 1, 4, 7, 10, 13, 16, ...  
find a likely general rule  $a_n = ??$

[EX6] Given the sequence -2, 4, -8, 16, -32, 64, -128, ...  
find a likely general rule  $a_n = ??$

[EX7] Given the sequence 10, 100, 1000, 10000, 100000, ...  
find a likely general rule  $a_n = ??$

**[EX8]** Given the sequence  $-1, 1, -1, 1, -1, 1, -1, 1, \dots$   
find a likely general rule  $a_n = ??$

**[EX9]** Given the sequence  $3, 8, 15, 24, 35, \dots$

- (A) Find a likely next term for the sequence.
- (B) Identify a general rule for this sequence  $a_n = ??$

**[EX10]** Given the sequence  $0, 6, 24, 60, 120, 210, \dots$

- (A) Find a likely next term for the sequence.
- (B) Identify a general rule for this sequence  $a_n = ??$

**[EX11]** Given the sequence  $60, 30, 20, 15, 12, \dots$

- (A) Find a likely next term for the sequence.
- (B) Identify a general rule for this sequence  $a_n = ??$

**[EX12]** To predict the "likely" next term in a sequence, investigate \_\_\_\_\_

5	3	10
7	10	-1
9	14	-6
11	15	-5
13	13	2
15	8	15
17	0	
19		