

CP Geometry
HW: Inductive Reasoning

Name: _____

In Problems 1 - 5, you must show work on how you got your answer.

- 1.) Given the sequence 15, 16, 17, 18, 19 ...
- (A) Find a likely next term for the sequence.
 - (B) Identify a general rule for this sequence $a_n = ??$
- 2.) Given the sequence 4, 16, 64, 256 ...
- (A) Find a likely next term for the sequence.
 - (B) Identify a general rule for this sequence $a_n = ??$
- 3.) Given the sequence 15, 24, 35, 48, 63, ...
(Hint: Look for the product of two numbers)
- (A) Find a likely next term for the sequence.
 - (B) Identify a general rule for this sequence $a_n = ??$
- 4.) Given the sequence 30, 15, 10, 7.5, 6, ...
- (A) Find a likely next term for the sequence.
 - (B) Identify a general rule for this sequence $a_n = ??$
- 5.) Given the sequence -3, 9, -27, 81, -243, ...
- (A) Find a likely next term for the sequence.
 - (B) Identify a general rule for this sequence $a_n = ??$

In Problems 6 - 10, show your differences used to identify the next term.

6.) Find the likely next term in the sequence: $-1, -6, -8, -7, -3, 4, ???$

7.) Find the likely next term in the sequence: $8, 15, 20, 23, 24, ???$

8.) Find the likely next term in the sequence: $20, 10, 1, -4, -2, 10, ???$

9.) Find the likely next term in the sequence: $-20, -9, -1, 4, 6, 5, ???$

10.) Find the likely next term in the sequence: $20, 6, -3, -7, -6, ???$

11.) Find the likely 100th term in the sequence: $184, 188, 192, 196, \dots, ???$