**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**CC Algebra Classwork**

**Sequences Day 1**

1. What is the common difference in this arithmetic sequence?

{16, 10, 4, -2, -8, ...}

1. 4 c. 6

b. -4 d. -6

2. Which of the following sequences is a geometric sequence?

a. {2, 4, 6, 8, 10, ...} c. {2, 4, 7, 11, 16, ...}

b. {2, 4, 8, 16, 32, ...} d. {2, 8, 14, 20, 26, ...}

3. The sequence shown below is an arithmetic sequence. What is the value of the missing term?

 {6, 9, , 15, 18, ...}

1. 10 c. 12
2. 11 d. 14

4. Find the fourth term of this geometric sequence.

{459, 153, 51, ...}

1. 17 c. 25.5
2. -17 d. -25.5

5. What are the first three terms of this sequence?

an= n2 + 1

6. What is the tenth term of this sequence?

an= (-1)n-1• n2

7. The following diagrams form a sequence based upon the number of toothpicks needed to create the

 shapes.

Top of Form

**a)** Which numerical list represents this sequence?

a. {8, 16, 24, ...} c. {8, 15, 22, ...}

b. {10, 20, 30, ...} d. {10, 19, 28, ...}

**b)** How many toothpicks are needed to create the 6th diagram in the sequence?

8. Which of the following sequences can be generated using?

 a.  c. 

 b.  d. 

9. Which sequence is generated by an = 4n - 3 ?

a. {1, 4, 7, 10, 13, ...} c. {0, 1, 5, 9, 13, ...}

b. {1, 5, 9, 13, 17, ...} d. {0, 1, 4, 7, 10, ...}

10. Which of the following function formulas describes this sequence?

{4, 8, 16, 32, 64, ...}

1. f (n) = n + 4 c. f (n) = 4n

b. f (n) = 2n d. f (n) = 2n+1