Name: _____ Date: _____

UNIT 5 **LESSON 1**

Lets Think! What would come next?

Do Now: Find the pattern and fill in the missing numbers.

a) 1,3,5,7 ___, ___, ___ b) 4,8,12,16 ___, ___, ___

AIM: ARITHMETIC SEQUENCE

A _____ is an ordered set of numbers. Each number in the sequence is called a _____.

1. Identify a pattern in the sequence and then find the missing terms:

3, 6, 9, 12, 15, 18,___ ,___ ,___

Rule:

2. Identify a pattern in the sequence and then find the missing terms :

48, 42, 36, 30,___ ,___ ,___

Rule:

3. The table below shows Eva's monthly DVD rental from Netflix.

a) How many DVD's per month does Eva rent from Netflix?

b) After five months how many DVD's did Eva rent?

Eva's DVDs	
Month	DVDs
1	3
2	6
3	9
4	12

c) Write the table as a sequence.

4. As shown in the table, the monthly rent of an apartment depends on the number of bedrooms.

a) What is the cost to rent each additional bedroom?

b) What will be the cost of a four bedroom apartment?

Bedrooms	Rent
1	$550
2	$625
3	$700

c) Write the table as a sequence.

In an _____, the amount by which the terms change each time is called the _____. The common difference is represented by _____.

* In an arithmetic sequence, you are either _____or _____ to find the next term!

5. Consider a sequence that follows **4, 7, 10, 13, 16, ….**

   a. What is the first term?

   b. What is the common difference?

Term Number "n"	Term

6. Consider a sequence that follows **−7, −9, −11, −13**

   a. What is the first term?

   b. What is the common difference?

Term Number "n"	Term

7. Consider a sequence that follows **3, 7, 11, 15, 19 …**

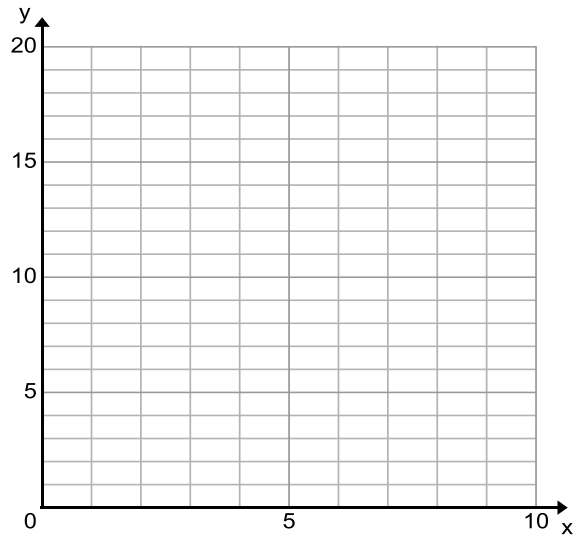
a) What is the first term?

b) What is the common difference?

c) Fill in table.

Term Number "n"	Term

d) Graph the table



What would the equation of this graph be?.... **Hint lets use our calculator!**

*** Arithmetic Sequences follow a _____ pattern!**

PRACTICE PROBLEMS

8. Is the following sequence *arithmetic:* **2, 5 , 7, 15, 16, 20…** Explain your answer.

9. Consider a sequence that follows: **18, 14, 10, 6, 2.....**

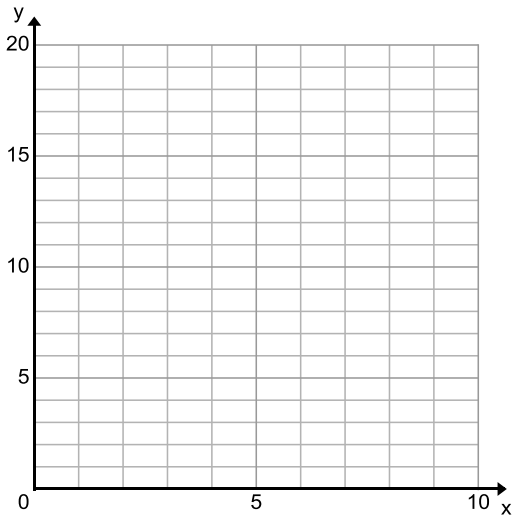
a) What is the first term?

b) What is the common difference?

c) Fill in table.

d) Graph the table

Term Number "n"	**Term**



10. Consider a sequence that follows*:* **3, 9, 15, 21.....**

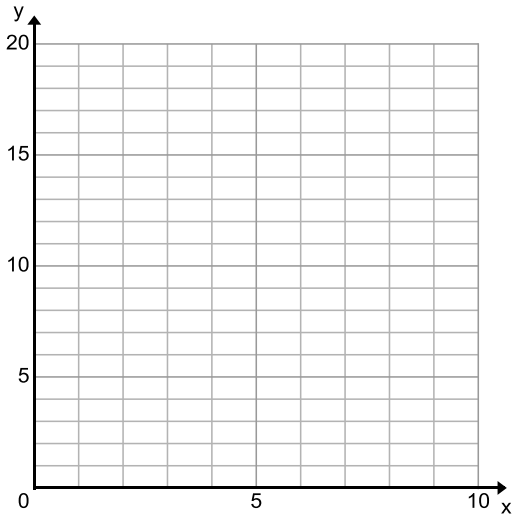
a) What is the first term?

b) What is the common difference?

c) Fill in table.

d) Graph the table

Term Number	**Term**



11. Using your calculator, go back and find the equation of the line for #9 and #10!