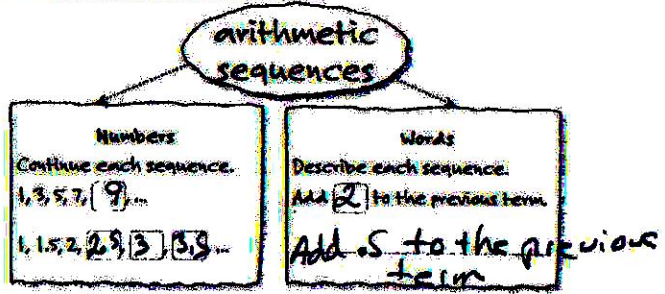


**Math 7 Notes**  
**Section 5.2 Sequences**

A **sequence** is an ordered list of numbers. Each number in a sequence is called a **term**. In an **arithmetic sequence**, each term is found by adding the same number to the previous term.

Complete the graphic organizer below.



Each term in a sequence has a specific position in the sequence.

1st	2nd	3rd	4th	5th	...	nth
3	6	9	12	15	...	<input type="text"/>

Find the algebraic expression that represents the nth term.

Position	Value of term
Think: 1	→ 3
2	→ 6
3	→ 9
4	→ 12
5	→ 15
n	→ 3n
1000	→ 3(1000) = 3000

6, 12, 18, 24, 30, 36, 42

Describe the relationship between the terms in this arithmetic sequence. Add 6 to the previous term

What are the next three terms in the sequence?  
30 36 42

Write an algebraic expression for the nth term in the sequence.

- 1<sup>st</sup> = 6
- 2<sup>nd</sup> = 12
- 3<sup>rd</sup> = 18
- n<sup>th</sup> = 6n

Find the value of the 1000th term.  
Evaluate 6n when n = 1000

6(1000)  
6000

1, 7, 13, 19, \_\_\_\_\_

Describe the relationship between the terms in this arithmetic sequence. Add 6 to the previous term

What are the next three terms in the sequence?  
25, 31, 37

Write an algebraic expression for the nth term in the sequence.

- 1<sup>st</sup> → 1     1·6 - 5
- 2<sup>nd</sup> → 7     2·6 - 5
- 3<sup>rd</sup> → 13    3·6 - 5
- 4<sup>th</sup> → 19    4·6 - 5
- n<sup>th</sup> → n·6 - 5

Find the value of the 1000th term.

6·1000 - 5  
6000 - 5 = 5995