

## Arithmetic Sequences (Worksheet # 2)

1. Write the first 5 terms of each sequence.

A.  $t_n = 2n + 3$

B.  $t_n = 2n - 1$

C.  $t_n = 2n$

n	To find $t_n$	$t_n$	n	To find $t_n$	$t_n$	n	To find $t_n$	$t_n$
1	$2(1)+3$	5	1	$2(1)-1$	1	1	$2(1)$	2
2	$2(2)+3$	7	2	$2(2)-1$	3	2	$2(2)$	4
3	$2(3)+3$	9	3	$2(3)-1$	5	3	$2(3)$	6
4	$2(4)+3$	11	4	$2(4)-1$	7	4	$2(4)$	8
5	$2(5)+3$	13	5	$2(5)-1$	9	5	$2(5)$	10

2. A. 5, 7, 9, 11, 13  
 $\begin{array}{cccc} \vee & \vee & \vee & \vee \\ 2 & 2 & 2 & 2 \end{array}$   
 $D_1 = 2$

B. 1, 3, 5, 7, 9  
 $\begin{array}{cccc} \vee & \vee & \vee & \vee \\ 2 & 2 & 2 & 2 \end{array}$   
 $D_1 = 2$

C. 2, 4, 6, 8, 10  
 $\begin{array}{cccc} \vee & \vee & \vee & \vee \\ 2 & 2 & 2 & 2 \end{array}$   
 $D_1 = 2$

3. Plot the following on graph:

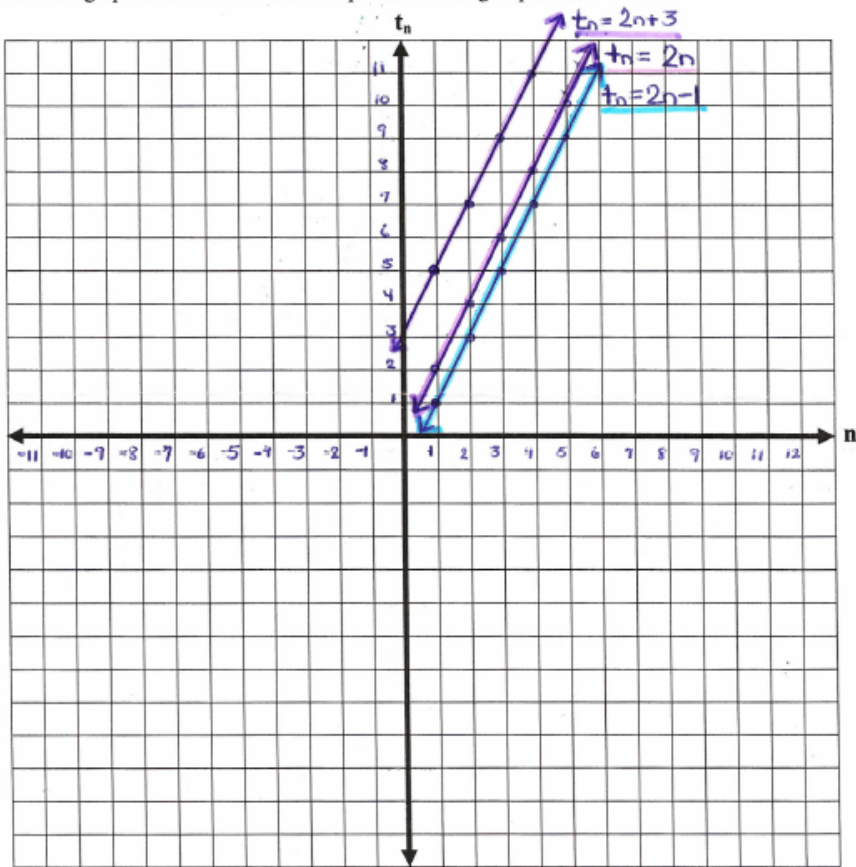
A.  $(1, 5)$   
 $(2, 7)$   
 $(3, 9)$   
 $(4, 11)$   
 $(5, 13)$

} From  
Above

B.  $(1, 1)$   
 $(2, 3)$   
 $(3, 5)$   
 $(4, 7)$   
 $(5, 9)$

C.  $(1, 2)$   
 $(2, 4)$   
 $(3, 6)$   
 $(4, 8)$   
 $(5, 10)$

3. Draw the graph of each of the above sequences on the grid provided below.



4. Remember: To find the slope  $\Rightarrow m = \frac{y_2 - y_1}{x_2 - x_1}$

A. Pick any 2 points. B (1,1) (5,9) C (1,2) (5,10)  
 $(1,5)$   $(4,11)$   
 $x_1 \ y_1 \quad x_2 \ y_2$

$$\begin{aligned} m &= \frac{y_2 - y_1}{x_2 - x_1} \\ &= \frac{11 - 5}{4 - 1} \\ &= \frac{6}{3} \\ &= 2 \end{aligned}$$

$$\begin{aligned} m &= \frac{y_2 - y_1}{x_2 - x_1} \\ &= \frac{9 - 1}{5 - 1} \\ &= \frac{8}{4} \\ &= 2 \end{aligned}$$

$$\begin{aligned} m &= \frac{y_2 - y_1}{x_2 - x_1} \\ &= \frac{10 - 2}{5 - 1} \\ &= \frac{8}{4} \\ &= 2 \end{aligned}$$