

**DO NOW:**

Label the following as either  
Sequence, Arithmetic Sequence, or Series

a)  $2 + 5 + 8 + 11 + 14$

d)  $\sum_1^7 2n$

b)  $10, 9, 8, 7, 6, 5 \dots$

e)  $t_1 = 5$   
 $t_n = (t_{n-1}) + 3$

c)  $10, 20, 40, 80, 160 \dots$

f)  $t_1 = 5$   
 $t_n = 10(t_{n-1})$

Label the following as either  
Recursive Formula, or Explicit Formula

a)  $t_1 = 5$   
 $t_n = (t_{n-1}) + 3$

d)  $t_1 = 6$   
 $t_n = 7(t_{n-1})^2$

b)  $t_n = n + 3$

e)  $t_n = (n - 1)^2$

c)  $t_n = 10 - 4(n - 1)$

f)  $t_n = 5 + 3(n - 1)$

**HW Questions???**

**p. 703-704 # 9, 11, 13, 15, 17, 19, 21, 31, 32, 39, 42**

**Objective: Write and use Explicit and Recursive Formulas for Arithmetic Sequences**

Suppose  $t_1=3$  and  $t_n = (t_{n-1})+4$

With your group, can you find an explicit formula?

$$t_1 =$$

$$t_2 =$$

$$t_3 =$$

$$t_4 =$$

$$t_5 =$$

$$t_n =$$

Express an Arithmetic Sequence with an Explicit Formula:

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Recursive Formula

$$t_n = (t_{n-1}) + d$$
$$t_1 = \#$$

Explicit Formula

$$t_n = t_1 + d(n-1)$$

Write the explicit formula for each sequence.

1) -12, -9, -6, -3, 0, ...

2) 20, 18, 16, 14, 12 ...

Write the Recursive formula for each sequence.

1) -12, -9, -6, -3, 0, ...

2) 20, 18, 16, 14, 12 ...

Explicit Formula  
 $t_n = t_1 + d(n-1)$

Given the first term and the common difference of an arithmetic sequence

- a) Find the Explicit Formula.
- b) Find the 10<sup>th</sup> term of the sequence.

1)  $t_1 = 28, \quad d = 10$

2)  $t_1 = -38, \quad d = -100$

3)  $t_1 = -34, \quad d = -10$

4)  $t_1 = 35, \quad d = 4$

HW: p. 704 #33, 34, 40, 41, 57, 60