Do Now

Practice from pg 696

42) $\sum_{n=1}^{3} 4$

44) $\sum_{j=1}^{4} 3j$

53) $\sum_{k=1}^{3} (-3k + 1)$

Write a recursive formula for the following sequences.

a) -4, -1, 2, 5, 8…

b) -1, 5, -25, 125 …

Use the recursive formula to find the first 4 terms of each arithmetic sequence.

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

b) $t_1 = 5$
$t_n = t_{n-1} + 2$

Objective: Recognize Arithmetic Sequences

The following sequences are **Arithmetic**	The following sequences are **NOT** Arithmetic
1) **3, 5, 7, 9, 11...**	**3, 5, 8, 12, 17...**
2) **10, 20, 30, 40, 50...**	**10, 20, 40, 80, 160...**
3) **7, 3, -1, -5, -9 ...**	**7, 0, 7, 0, 7 ...**
4) **a, 2a, 3a, 4a, 5a, ...**	**a, .5a, .25a, .125a, ...**
5) **y, y+3, y+6, y +9, y +12, ...**	**y, y+1, y+5, y +9, y +10, ...**

Arithmetic Sequence:
A sequence where the **difference** between each term is always _____

The **difference** between each term of an Arithmetic Sequence is called _____, _____

State the **common difference** of the Arithmetic sequences above:

1) d = _____

2) d = _____

3) d = _____

4)

5)

Determine which of the sequences is arithmetic.
If it is, identify the common differences, d.

1) -9, -7, -5, -3

2) 3, -3, 3, -3

3) $\pi, 2\pi, 3\pi, 4\pi$ ...

4) $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, 1, \frac{5}{4}$

5) 4, 8, 16...

6) 5.2, 5.4, 5.6, 5.8...

7) 11, 11, 11, 11...

8) .9, .99, .999, .9999...

9) 1, 2.1, 3.2, 4.3, 5.4 ...

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