

## DO NOW:

Find the next 3 terms of the sequences below.

What is the rule to get from one term to the next?

Try writing a recursive formula using  $t_n =$  the rule and  $(t_{n-1})$

a) 1, 5, 9, 13, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ Rule: \_\_\_\_\_

Recursive formula:  $t_n =$

a) 1, 3, 9, 27, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ Rule: \_\_\_\_\_

Recursive formula:  $t_n =$

## HW Questions??

pg. 696 #11, 13, 16, 20, 23-25, 27, 29, 32

**A series** - is an **expression** that indicates the \_\_\_\_\_ of a **sequence**.

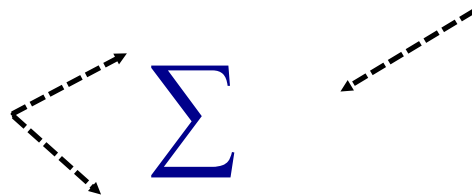
Ex. **Sequence:** 2, 4, 6, 8, 10 (rule? \_\_\_\_\_)

**Series:** \_\_\_\_\_

**Summation notation** uses **sigma** \_\_\_\_\_ as a shortcut to expressing a series.

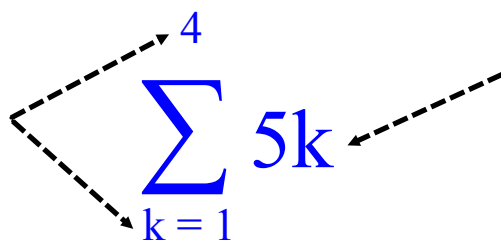
Ex.  $2 + 4 + 6 + 8 + 10$

Summation Notation:



(which is read as \_\_\_\_\_)

3) Write the terms of the series. Then evaluate.

$$\sum_{k=1}^4 5k$$
The image shows the summation symbol  $\sum$  with a blue upper limit of 4 and a blue lower limit of  $k=1$ . To the right of the symbol is the term  $5k$ . Dashed black arrows point from the upper limit 4 to the top of the summation symbol, from the lower limit  $k=1$  to the bottom of the summation symbol, and from the term  $5k$  to the right side of the summation symbol.

*Practice: p. 696 # 43, 46, 49, 52*

$$43) \sum_{k=1}^4 10$$

$$46) \sum_{n=1}^5 -2n$$

$$49) \sum_{a=1}^5 \frac{1}{3} a^2$$

$$52) \sum_{m=1}^4 2m + 3$$

**HW: Have a wonderful weekend!**