

Thursday, November 12th

**Finding the rule of a sequence:**

A sequence often presents a pattern. We can determine all the terms of this sequence by using a rule. The rule calculates a term  $t$  on its rank  $r$ .

<b>Rank</b>	1	2	3	4	5	...	$r$
<b>Term</b>	5	7	9	11	13	...	$t$

Therefore, the term of rank 5 =  $2 \times 5 + 3 = 13$

Practice:

1. For each of the following rules, give the first 5 terms of the sequence.

- a.  $t=7r$  \_\_\_\_\_
- b.  $t= 4r - 1$  \_\_\_\_\_
- c.  $t= r^3$  \_\_\_\_\_
- d.  $t= 2(r +1)$  \_\_\_\_\_

2. Determine the rule for the following sequence:

a. \_\_\_\_\_

$r$	$t$
1	5
2	10
3	15
4	20
...	...

b. \_\_\_\_\_

$r$	$t$
1	1
2	4
3	9
4	16
...	...

3. For each of the following, determine **1.** the rule of the sequence, **2.** the term of rank 12, and **3.** the rank of term 100.

a. The sequence of a non-zero natural number.

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

b. The sequence of non-zero multiples of 3

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

Homework:

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