

Do Now

Examine the following series and fill in the next 4 terms:

1, 3, 5, 7, 9, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_...

To get from one term to the next, we must \_\_\_\_\_.

This is a *linear* function, where the term number is the “x” value and the value of the term is “y”.

X	1	2	3	4	5	6	7	8	9
Y	1	3	5	7	9				

Notice that the change in x is 1 and the change in y is 2; the equation of the line is  $y = 2x - 1$ . The slope is 2, and the y-intercept is -1.

Now, examine the following series and fill in the next 4 terms:

1, 2, 4, 8, 16, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_...

To get from one term to the next, we must \_\_\_\_\_.

This function is called an *exponential* function because to get from one term to the next, we must multiply the same number repeatedly. In this case, that number is “2”.

X	1	2	3	4	5	6	7	8	9
Y	1	2	4	8	16				

The equation of this function is  $y = 2^{x-1}$ .