

Review:

Objective: Find the terms of a sequence given an explicit or recursive formula

Do Now

Write the first four terms in the sequences below:

1) $t_n = 4n - 3$

2) $t_1 = -2$

$$t_n = 5t_{n-1} + 4$$

3) $a_1 = 1, a_2 = 1$

$$a_n = a_{n-2} + a_{n-1}$$

For each sequence,

a) Find the next three terms.

b) State the difference (d) between each term.

1) 8, 5, 2, -1, _____, _____, _____, ... d = _____

2) 4, 8, 12, 16, _____, _____, _____, ... d = _____

3) 9, 16, 23, 30, _____, _____, _____, ... d = _____

Write the first six terms of the sequence:

1) $b_n = 2.5n$	2) $a_1 = -5, \quad a_n = 3a_{n-1}$
3) $t_n = n^2 + 12$	4) $a_1 = 20, \quad a_n = 3a_{n-1} + 10$
5) $a_1 = 1, \quad a_n = a_{n-1} + 100$	6) $f_n = \frac{1}{2}n - \frac{1}{2}$

For each sequence below, find the next three terms.

1) 1, 11, 121, 1331, ...	2) 81, 78, 75, 72, ...	3) 2, -6, 18, -54 ...
4) $\frac{1}{4}, -1, 4, -16, \dots$	5) 1, 4, 9, 16, 25, ...	6) 1, 1, 2, 3, 5, 8, 13, ...

Find the indicated term below:

1) Find the 25 th term: $t_n = n - 4$	2) The 3 rd term: $t_n = t_{n-1} + t_{n-2}, t_1 = 7, t_2 = 10$	3) Find the 100 th term: $t_n = n^2 - 10000$
4) Find the 19 th term: $t_n = t_{n-1} + 25, t_{18} = 15$	5) Find the 7 th term: $t_n = -t_{n-1}, t_8 = 5$	6) Find the 13 th term: $t_n = (n-1)^2$

1) It starts snowing hard at 10:00pm. The snow accumulates at 4 inches every hour. The superintendent will give you a snow day if there is 2 feet of snow by 5:00am. Give the first 8 terms of the sequence below. Assuming the snowfall does not stop or slow down, will you get a snow day???

_____, _____, _____, _____, _____, _____, _____, _____