

For each of the following sequences, find the value of t_5 , t_6 , and t_n . State whether the sequence is arithmetic, geometric or neither.

1. 2, -2, 2, -2, ...
2. 100, 90, 80, 70, ...
3. 3, -9, 27, -81, ...
4. 80, 40, 20, 10, ...
5. 2, 5, 10, 17, ...
6. 1, 5, 9, 13, ...

Find the first four terms of the following sequences. State whether the sequence is arithmetic, geometric or neither.

7. $t_1 = 10$ and $t_n = 2t_{n-1} - 5$
8. $t_n = n - \frac{1}{n}$
9. $t_n = 2n + 3$
10. $t_n = 5^n$
11. $t_1 = 5$; $t_2 = 8$; $t_n = t_{n-1} + t_{n-2}$

12. Find x if the sequence 1, 5, $2x+3$, ... is (a) arithmetic and (b) geometric.

13. Find x if the sequence 1, x , $\frac{2}{3}x$, ... is (a) arithmetic and (b) geometric.