

SEQUENCES AND SERIES

1. Write the first 5 terms of the sequence: $a_n = 5n - 1$

_____, _____, _____, _____, _____, ...

	Sequence	Geometric or Arithmetic	Common Difference or Ratio
2	-8, -4, 0, 4, ...		
3	5, 10, 20, 40, ...		
4	2, 2.4, 2.88, 3.456, ...		

For each of the sequences, write the recursive formula and explicit formulas.

		Explicit Formula
5	4, 14, 24, 34, 44, ...	
6	120, 60, 30, 15, $\frac{15}{2}$, ...	
7	-100, -90, -80, -70 ...	
8	3, 4, 5.33, 7.11, ...	

9. For question #5, find a_{18} .

10. Write the explicit formula:
 $a_{12} = 58; d = 5$

11. Find the sum of the series from 1 – 20.

4, 14, 24, 34, 44, ...

12. Find the sum of the series from 1 – 15.

3, 4, 5.33, 7.11, ...

Find the sum of the series.

13.
$$\sum_{i=1}^7 3i + 4$$

14.
$$\sum_{i=1}^7 4\left(\frac{2}{3}\right)^{i-1}$$

15.
$$\sum_{i=1}^{\infty} 5\left(\frac{1}{3}\right)^{i-1}$$

16.
$$\sum_{i=1}^5 4i$$

17.
$$\sum_{i=1}^5 3\left(\frac{2}{5}\right)^{i-1}$$

18.
$$\sum_{i=1}^{\infty} 7\left(\frac{1}{2}\right)^i$$