Sequences and Series SS5: Intro to Series

For the given sequences:

a. **Determine** if it is Arithmetic or Geometric
b. **Write** the terms of the given partial sum
c. **Calculate** the partial sum

Ex: $a = 6, 3, 0, -3, ...;$ S_7

a.) $Arithmetic$ b.) $S_7 = 6 + 3 + 0 + -3 + -6 + -9 + -12$ c.) $= -21$

1. $a = 4, 2, 1, ...;$ S_4

2. $a = 1, 6, 11, 16, ...;$ S_6

3. $a = 2, 4, 6, 8, ...;$ S_8

4. $a = 1, 4, 16, 64, ...;$ S_6

5. $a = 2, -6, 18, -54, ...;$ S_6

6. $a = 5, 10, 15, 20, ...;$ S_{10}

7. $a = 1, 2, 3, 4, ...;$ S_{20}

8. $a = \frac{1}{3}, \frac{5}{3}, \frac{25}{3}, ...;$ S_5

9. $a = 1, 0.1, 0.01, 0.001, ...;$ S_{15}

10. $a = 1, 1, 1, 1, ...;$ S_{40}