



Student No.:	Date: / /	Score: /21
Student Name:		

Revision of Arithmetic Sequences (I)

Exercises

1. Determine whether each of the following sequence is an arithmetic sequence. If so, state the common difference d .

(a) $3, -3, 3, -3, \dots$

(b) $0, 6, 12, 18, \dots$

(c) $41, 24, 7, -10, \dots$

2. Determine whether each of the following is a general term of an arithmetic sequence. If so, find the common difference d .

(a) $T_n = 4n + 5$

(b) $T_n = n^2 - 1$

3. Find the general term T_n and the 9th term of each of the following arithmetic sequences.

(a) $2, 8, 14, 20, \dots$

(b) $41, 37, 33, 29, \dots$

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4. If the 5th term and the 20th term of an arithmetic sequence are 66 and -9 respectively, find the general term T_n of the sequence.
5. Consider an arithmetic sequence $43, 40, 37, \dots, -11$.
- (a) Find the number of terms in the sequence.
 - (b) Find the number of positive terms in the sequence. Hence, find the smallest positive term in the sequence.
 - (c) Do you think that 0 is a term in the sequence? Explain briefly.
6. In an arithmetic sequence T_1, T_2, T_3, \dots , it is given that $T_2 = 11$ and $T_3 = 7$. Find
- (a) T_1 ,
 - (b) T_{20} ,
 - (c) the sum of the first 20 terms.

7. In an arithmetic sequence, the common difference is 8, the last term is 158 and the sum of the terms is 1640. Find the first term and the number of terms.
8. There are 50 floors in a multi-storey mansion. The price per square metre for the 1st floor is \$75000. The price per square metre for an upper floor is \$550 higher than the floor just below it. Find the price per square metre for
- (a) the 24th floor,
 - (b) the 50th floor.
9. The five interior angles of a pentagon form an arithmetic sequence. If the smallest interior angle is 88° , find the other four interior angles.

S6E-5A

M.C.

1. Find the next term of the sequence $\frac{2}{3}, \frac{8}{9}, \frac{32}{27}, \dots$

A. $\frac{128}{81}$

B. $\frac{54}{81}$

C. $\frac{128}{192}$

D. $\frac{54}{192}$

2. Which of the following is/are in arithmetic sequence?

I. $-1, 0, 1, 2, \dots$

II. $\log 2, \log 4, \log 8, \log 16, \dots$

III. $\frac{3}{4}, \frac{9}{8}, \frac{27}{16}, \frac{81}{32}, \dots$

A. I only

B. I & II only

C. II & III only

D. I, II & III

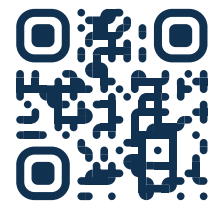
3. If five numbers are inserted between p and $3q$ such that all the seven numbers form an arithmetic sequence, find the sum of the five numbers inserted.

A. $5(p + 3q)$

B. $\frac{3q - p}{6}$

C. $2p + 9q$

D. $\frac{5(p + 3q)}{2}$



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