IGCSE – Sequences and nth term – 3

Oct 01 Paper 4

9   (a)   Write down the next two terms in the sequence

      7,   10,   15,   22, ...   [2]

   (b)   Write down the next term and the 50th term in the sequence

$$\frac{2}{5}, \quad \frac{3}{7}, \quad \frac{4}{9}, \quad \frac{5}{11}, \quad ....$$ [3]

   (c)   Write down the next two terms and find an expression for the nth term in the sequence

      17,   13,   9,   5, ...   [4]

Oct 02 Paper 4

9   (a)   Write down the 10th term and the nth term of the following sequences.

     (i)   1, 2, 3, 4, 5 ..., ...,   [1]

     (ii)   7, 8, 9, 10, 11 ..., ...,   [1]

     (iii)   8, 10, 12, 14, 16 ..., ...   [3]

   (b)   Consider the sequence

     $1(8 - 7), \; 2(10 - 8), \; 3(12 - 9), \; 4(14 - 10), \; ...., \; ....$

     (i)   Write down the next term and the 10th term of this sequence in the form $a(b - c)$ where a, b and c are integers.   [3]

     (ii)   Write down the nth term in the form $a(b - c)$ and then simplify your answer.   [2]

Oct 03 Paper 2

3   The first five terms of a sequence are   4, 9, 16, 25, 36, ...
Find

   (a)   the 10th term,

                        Answer (a)... [1]

   (b)   the nth term.

                        Answer (b)... [1]

Oct 05 Paper 2

4   Write down the next term in each of the following sequences.

   (a)   8.2,   6.2,   4.2,   2.2,   0.2,   ...

                    Answer(a) .... [1]

   (b)   1,   3,   6,   10,   15,   ...

                    Answer(b) .... [1]