1. In an arithmetic sequence, the first term is 7 and the second is 12.

   (a) Find the common difference (2 marks)

   (b) Find the 15th term of the sequence (2 marks)

   (c) Find the sum of the first 20 terms of the sequence (2 marks)

Mark scheme:

(a) $d = 12 - 7$ (M1)

$d = 5$ (A1)

(b) $u_{15} = 7 + (15 - 1)(5)$ (M1)

$u_{15} = 77$ (A1)

(c) $S_{20} = \frac{20}{2}(2(7) + (20 - 1)(5))$ (M1)

$S_{20} = 1090$ (A1)