Revision:

1. Copy the formula for the nth term of an arithmetic sequence and state what each variable denotes. This can be found in your formula booklet.

2. One can calculate the value of d. For the sequence: $x, \ x + 2, \ x + 4$, demonstrate how. This is **not** in your formula booklet.

3. There are **two** formulas for the sum of arithmetic sequences. Copy both, denoting what each variable means. These are in your formula booklet.

   Formula 1:   Formula 2:

   Now try the following questions

   a) A sequence is as follows: $6, 10, 14, ...$
      Find the sum of the first 100 terms.

   b) A sequence is such that $u_1 = 10$, $u_2 = 17$ and $u_{100} = x$.
      i) Find the value of x
      ii) Find the sum of the first 100 terms.

   c) The sum of the first 20 terms of a sequence is 3560. Given that the common difference is 8, find u_1.

   Did you notice that sometimes Formula 1 is more appropriate than Formula 2, and vice versa? If not, we will talk about it.

Practice:

1. A sequence is as follows: $17, 14, 11, etc.$ Find:
   a) the common difference
   b) the 12th term.
   c) the sum of the first 12 terms.
   d) the value of S_{100}.
   e) the value of n when $u_n = -79$

2. For an arithmetic sequence, $U_4 = 12$ and $U_{10} = 222$
   a) Find u_1 and d.
   b) Calculate the sum of the first 10 terms.
   c) Determine if 438 is a term in the sequence.