MATHS·SCHOOL

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Name:

a) Find the sum of the first 25 terms of an arithmetic sequence that starts : $6, 10, 14, 18 \ldots$

1350

b) Find the sum of the first 50 terms of an arithmetic sequence that starts : $3, 8, 13, 18 \ldots$

6275

c) Find the sum of the first 30 terms of an arithmetic sequence that starts : $4, 7, 10, 13 \ldots$

1425

d) Find the sum of the first 26 terms of an arithmetic sequence that starts : $100, 96, 92, 88 \ldots$

1300

e) Find the sum of the 40th to the 60th terms of an arithmetic sequence that starts : $3, 5, 7, 9, 11 \ldots$

2121

f) Find the sum of the 60th to the 80th terms of an arithmetic sequence that starts : $2, 8, 14, 20, 26 \ldots$

8736

g) Find the sum of the 25th to the 70th terms of an arithmetic sequence that starts : $99, 96, 93, 90, 87 \ldots$

-1863

h) Find the sum of the 44th to the 66th terms of an arithmetic sequence that starts : $10, 13.5, 17, 20.5, 24 \ldots$

4577

For each arithmetic sequence described below, find the first term (**a**) and common difference (**d**) :

i) 7th term is 20. The sum of first 11 terms is 198.

a = 8, d = 2

j) 8th term is 35. The sum of first 10 terms is 250.

a = 7, d = 4

Exam question

The 5th term of an arithmetic sequence is 30.

$$S_n = \frac{n}{2}[2a + (n-1)d]$$

The sum of the first 6 terms of the arithmetic sequence is 135.

Find the 20th term of the sequence.

a = 10, d = 5   so 20th term = 105