

SEQUENCES & SERIES (Q 4 & 5, PAPER 1)

LESSON NO. 2: ARITHMETIC SEQUENCES

2006

4 (a) $-2 + 2 + 6 + \dots + (4n - 6)$ are the first n terms of an arithmetic series. S_n , the sum of these n terms, is 160. Find the value of n .

2003

4 (b) In an arithmetic series, the sum of the second term and the fifth term is 18. The sixth term is greater than the third term by 9.

(i) Find the first term and the common difference.

(ii) What is the smallest value of n such that $S_n > 600$, where S_n is the sum of the first n terms of the series?

2002

4 (c) Three numbers are in arithmetic sequence. Their sum is 27 and their product is 704. Find the three numbers.

ANSWERS

2006 4 (a) $n = 10$

2003 4 (b) (i) $a = \frac{3}{2}$, $d = 3$ (ii) $n = 21$

2002 4 (c) $\frac{32}{3}$, 9, $\frac{22}{3}$