Sequences & Series (Q 5, Paper 1)

Lesson No. 7: Geometric Sequences

2005

5 (c) In a geometric sequence of positive terms, the third term is $\frac{1}{4}$ and the fifth term is $\frac{1}{16}$.

(i) Find r, the common ratio.

(ii) Find a, the first term.

(iii) How many terms of the sequence are greater than 0·01?

2003

5 (a) The first term of a geometric sequence is 4 and the commom ratio is 1·5.
Write down the next three terms of the sequence.

1997

5 (a) $T_1 + T_2 + T_3 + \ldots$ is a geometric series.
The first term, T_1, is 1 and the common ratio is 2.
Show that
$T_3 + T_5 = 2(T_2 + T_4)$.

Answers

2005 5 (c) (i) $\frac{1}{2}$ (ii) 1 (iii) 7

2003 5 (a) 6, 9, $\frac{27}{2}$