06	1f	Find the limiting sum of the geometric series $\frac{13}{5} + \frac{13}{25} + \frac{13}{125} + \ldots$	2

Using $S_\infty = \frac{a}{1-r}$ with $a = \frac{13}{5}$, $r = \frac{1}{5}$

$$S_\infty = \frac{13}{5} \div (1 - \frac{1}{5})$$
$$= \frac{13}{5} \div \frac{4}{5}$$
$$= 3\frac{1}{4}$$

* These solutions have been provided by *projectmaths* and are not supplied or endorsed by the Board of Studies

Board of Studies: Notes from the Marking Centre

Candidates must be careful when copying from the examination paper to their writing booklet. A number of candidates confused the letters 'a' and 'r' when identifying the common ratio, or did not clearly identify 'r'. Candidates also confused the common ratio with the limiting sum.

Source: http://www.boardofstudies.nsw.edu.au/hsc_exams/