

- (43) What is the first term of a series when the last term = 1024000, the common ratio = 4, and number of terms = 6? Ans. $a = 1000$.
- (44) Given the first term = 2, the last term = 512, and the common ratio = 4, what is the number of terms? Ans. $n = 5$.
- (45) What is the common ratio of a series of which the first term = 64, last term = $63\frac{1}{3}$, and number of terms = 12? Ans. $r = \frac{1}{4}$.
- (46) The extremes of a series are 12 and 175692 and the common ratio is 11; what is the sum? Ans. $S = 193260$.
- (47) Find the first term of a series of which the common ratio = 3, the last term = 4374, and the sum = 6560. Ans. $a = 2$.
- (48) Given the sum of the series = 4095, common ratio = 2, first term = 1, to find the last term. Ans. $l = 2048$.
- (49) Given the sum of the series = 1023, the last term = 512, and the first term = 1, to find the common ratio. Ans. $r = 2$.
- (50) Find the sum of an Infinite series of which the first term = $\frac{7}{16}$ and the ratio = $\frac{1}{16}$. Ans. $S = \frac{7}{8}$.
Find the value of $.46\bar{3}$ ad infinitum. Ans. $S = \frac{46\bar{3}}{999}$.
- (51) Given the sum of an Infinite series = 2, and the common ratio = $\frac{1}{2}$ to find the first term. Ans. $a = 1$.
- (52) Find the common ratio of an Infinite series of which the first term is 17 and the sum 18. Ans. $r = \frac{1}{18}$.
- (53) What is the amount of an annuity of £436 forborne 12 years at $3\frac{1}{2}$ per cent. simple interest? Ans. $M = £6239\ 3s.\ 2\frac{1}{2}d.$
- (54) What annuity will amount to £385; if forborne 5 years at 5 per cent. simple interest? Ans. $A = £70$.
- (55) At what rate per cent. will an annuity of £356 amount to £3972 19s. $2\frac{1}{2}d.$; if forborne 9 years, allowing simple interest? Ans. $r = 6$ per cent.
- (56) In what time will an annuity of £37 amount to £508 15s. at 5 per cent. simple interest? Ans. $t = 11$ years.