



e-Edge Education Centre, www.eeeclases.info

Time-35 Min

Class-XI

M.M-30

- 1 Find the sum to n terms of each of the series in $\frac{1}{1 \times 2} + \frac{1}{2 \times 3} + \frac{1}{3 \times 4} + \dots$
2. The sum of two numbers is 6 times their geometric means, show that numbers are in the ratio $(3 + 2\sqrt{2}) : (3 - 2\sqrt{2})$.
3. If the p^{th} , q^{th} and r^{th} terms of a G.P. are a , b and c , respectively. Prove that $a^{q-r} b^{r-p} c^{p-q} = 1$.
4. Find the value of n so that $\frac{a^{n+1} + b^{n+1}}{a^n + b^n}$ may be the geometric mean between a and b .
5. The sum of two numbers is 6 times their geometric means, show that numbers are in the ratio $(3 + 2\sqrt{2}) : (3 - 2\sqrt{2})$.
6. If the first and the n^{th} term of a G.P. are a and b , respectively, and if P is the product of n terms, prove that $P^2 = (ab)^n$.