

Assignment in Mathematics
Class - B.C.A. 1st Year

Attempt any two question.
M.M. - 50

1) Express $\frac{5x^2 + 7x + 8}{(x+1)(x^2 + 2x + 3)}$ into partial fraction.

b) Using the property of determinants.

Prove that
$$\begin{vmatrix} x & a & x+a \\ y & b & y+b \\ z & c & z+b \end{vmatrix} = 0$$

2) Find the sum of the infinite series.

$$\frac{1}{2 \cdot 3 \cdot 4} + \frac{1}{4 \cdot 5 \cdot 6} + \frac{1}{6 \cdot 7 \cdot 8} + \dots$$

3) Prove that: $\cot x \cot 2x - \cot 2x \cot 3x - \cot 3x \cot x = 1$

4) Find the Parabola $y^2 = 8x$.

5) Following are the marks obtained by 10 students of a class calculate standard deviation.

Marks	12	8	17	13	15	9	18	11	6	1
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