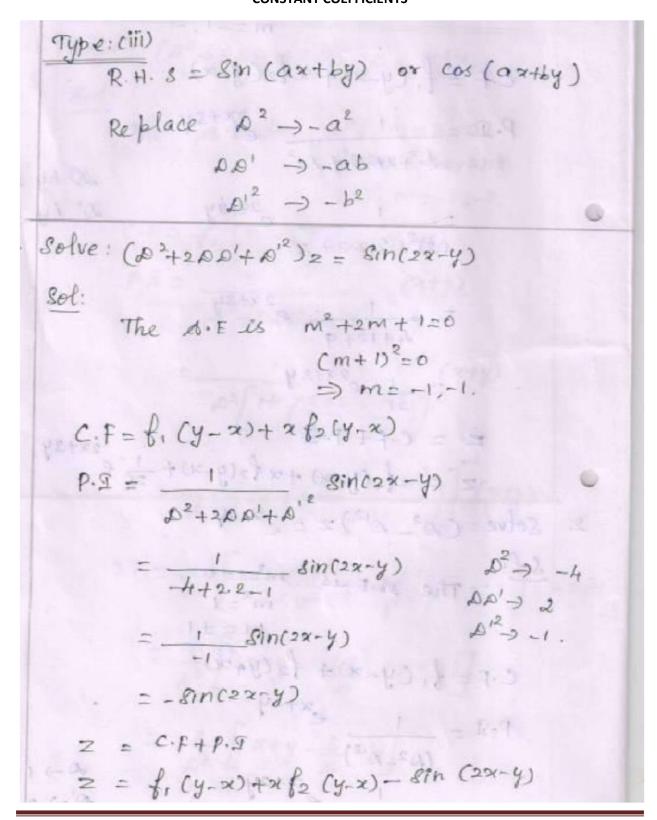




# TOPIC: 11 - SOLUTIONS OF LINEAR EQUATIONS OF SECOND AND HIGHER ORDER WITH CONSTANT COEFFICIENTS







2. Solve: 
$$(D^2 - 4D^{12}) z = \cos 2 \pi \cos 2 y$$

Solve:  $(D^2 - 4D^{12}) z = \frac{1}{2} \int \cos (2x + 3y) + \cos (2x + 3y)$ 

The  $A \in \mathbb{R}$  is  $M^2 + 1 = 0$ .

 $M^2 = H$ 
 $M = \pm 2$ .

 $C \cdot F = \int_1 (y + 2x) + \int_2 (y - 2x)$ 
 $D^2 - 4D^{12}$ 
 $D$ 









$$P.I = \frac{1}{\rho^{2}} \left[ x + y - 3x \right]$$

$$= \frac{1}{\rho^{2}} \left[ y - 2x \right]$$

$$= \frac{1}{\rho^{2}} \left[ (y - x) + \int_{2}^{2} (y - 2x) + \frac{y}{2}x^{2} - x^{3} \right]$$

$$= \frac{1}{\rho^{2}} \left[ (y - x) + \int_{2}^{2} (y - 2x) + \frac{y}{2}x^{2} - x^{3} \right]$$

$$= \frac{1}{\rho^{2}} \left[ (y - x) + \int_{2}^{2} (y - 2x) + \frac{y}{2}x^{2} - x^{3} \right]$$

$$= \frac{1}{\rho^{2}} \left[ (x - x) + \int_{2}^{2} (y - x) + \int_{2}^{2} (x - x) + \int_$$





$$P.I = \frac{1}{b^{2}} \left( \frac{\chi^{2}y - \frac{\chi^{2}}{2}}{2} \right)$$

$$= \frac{1}{b^{2}} \left( \frac{\chi^{2}y - \frac{\chi^{3}}{3}}{3} \right)$$

$$= \frac{1}{b} \left( \frac{\chi^{3}}{3} y - \frac{\chi^{4}}{12} \right)$$

$$= \frac{\chi^{4}}{12} y - \frac{\chi^{5}}{bo}$$

$$= \frac{1}{12} \left( \frac{\chi^{2}y - \frac{\chi^{5}}{3}}{2} \right)$$

$$= \frac{\chi^{4}}{12} y - \frac{\chi^{5}}{60}$$

$$= \frac{\chi^{4}}{12} y - \frac{\chi^{5}}{60}$$