

SOLUTION OF IITJEE 2012; PAPER 2 ; BHARAT MAIN SABSE PAHLE, WEBSITE PAR BHI...

Q.44 The eq. of Plane -----

$$44. \quad x(1+\lambda) + y(2-\lambda) + z(3+\lambda) - 2 - 3\lambda = 0$$

$$\frac{(3(1+\lambda) + 2 - \lambda - 3 - \lambda - 2 - 3\lambda)}{\sqrt{(1+\lambda)^2 + (2-\lambda)^2 + (3+\lambda)^2}} = \frac{2}{\sqrt{3}}$$

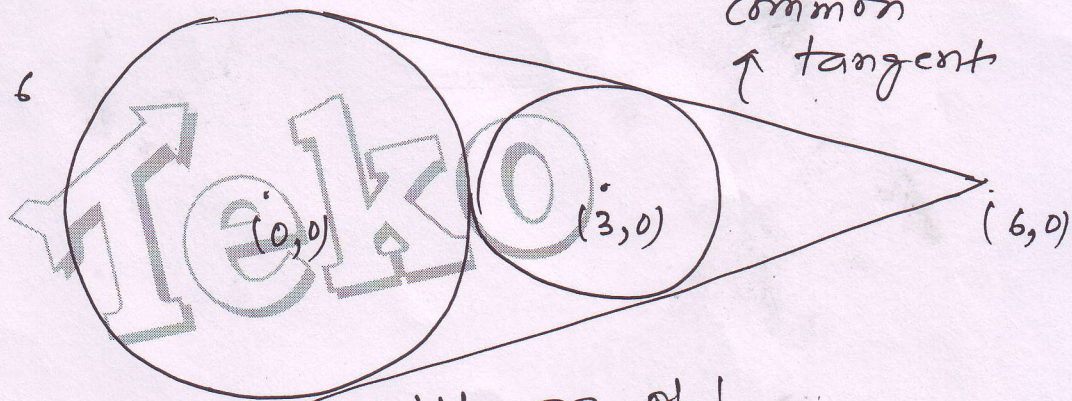
$$3\lambda^2 = (1+\lambda)^2 + (2-\lambda)^2 + (3+\lambda)^2$$

$$\lambda = -\frac{7}{2}$$

Plane : $5x - 11y + z = 17$

51. (D) Paragraph Type: A common tangent -----

only $x + 2\sqrt{2}y = 6$
satisfies
 $(6, 0)$



52. (A) Paragraph Type → A possible eq. of L.

$$(A) \quad PT \equiv x\sqrt{3} + y = 1$$

$$(D) \quad L \equiv x - \sqrt{3}y = c$$

$$\sqrt{3}y = x - c = (x-3) + (3-c)$$

$$y = \frac{(x-3)}{\sqrt{3}} + \frac{(3-c)}{\sqrt{3}}$$

$$\therefore \frac{3-c}{\sqrt{3}} = \pm \sqrt{1 + \frac{1}{3}} = \frac{\pm 2}{\sqrt{3}}$$

$$3-c = \pm 2$$

$$c = 3 \mp 2 = 1, 5$$

$$x - \sqrt{3}y = 1, 5$$