



YASHWANT CLASSES

Head Office: Govind Vihar Tower, Behind Vaishali Cinema, Badlapur (W)

Date : 06-07-2022

Time : 00:24:00

Marks : 40

TEST ID: 130
MATHEMATICS

10.STRAIGHT LINES,4.PAIR OF STRAIGHT LINES ,5.STRAIGHT LINES

Single Correct Answer Type

- The distance between the lines $5x - 12y + 65 = 0$ and $5x - 12y - 39 = 0$ is
a) 4 b) 16 c) 2 d) 8
- The determinant $\begin{vmatrix} x & y & 1 \\ x_1 & y_1 & 1 \\ x_2 & y_2 & 1 \end{vmatrix} = 0$ represents
a) A pair of straight lines
b) A straight line
c) A circle
d) None of these
- The lines $x \cos \alpha + y \sin \alpha = p_1$ and $x \cos \beta + y \sin \beta = p_2$ will be perpendicular, if
a) $\alpha \pm \beta = \frac{\pi}{2}$ b) $\alpha = \frac{\pi}{2}$
c) $|\alpha - \beta| = \frac{\pi}{2}$ d) $\alpha = \beta$
- The parallelism condition for two straight lines one of which is specified by the equation $ax + by + c = 0$ and the other being represented parametrically by $x = \alpha t + \beta, y = \gamma t + \delta$, is given by
a) $a\gamma + b\alpha = 0, \beta = \delta = c = 0$
b) $a\alpha - b\gamma = 0, \beta = \delta = 0$
c) $a\alpha + b\gamma = 0$
d) $a\gamma = b\alpha = 0$
- The equation of the bisector of the acute angle between the line $3x - 4y + 7 = 0$ and $12x + 5y - 2 = 0$ is
a) $99x - 27y - 81 = 0$ b) $11x - 3y + 9 = 0$
c) $21x + 77y - 101 = 0$ d) $21x + 77y + 101 = 0$
- The equation $x^2 + kxy + y^2 - 5x - 7y + 6 = 0$ represents a pair of straight lines, then k is
a) $5/3$ b) $10/3$ c) $3/2$ d) $3/10$
- The locus of the mid-point of the portion intercepted between the axes by the line $x \cos \alpha + y \sin \alpha = p$, where p is a constant is
a) $x^2 + y^2 = 4p^2$ b) $\frac{1}{x^2} + \frac{1}{y^2} = \frac{4}{p^2}$
c) $x^2 + y^2 = \frac{4}{p^2}$ d) $\frac{1}{x^2} + \frac{1}{y^2} = \frac{2}{p^2}$
- Points on the line $y = x$ whose perpendicular distance from the line $3x + 4y = 12$ are 4 have the coordinates
a) $\left(-\frac{8}{7}, -\frac{8}{7}\right), \left(-\frac{32}{7}, -\frac{32}{7}\right)$
b) $\left(\frac{8}{7}, \frac{8}{7}\right), \left(\frac{32}{7}, \frac{32}{7}\right)$
c) $\left(-\frac{8}{7}, -\frac{8}{7}\right), \left(\frac{32}{7}, \frac{32}{7}\right)$
d) None of these
- If x_1, x_2, x_3 as well as y_1, y_2, y_3 are in GP with the same common ratio, then the points $(x_1, y_1), (x_2, y_2)$ and (x_3, y_3)
a) Lie on a parabola
b) Lie on an ellipse
c) Lie on a circle
d) Lie on a straight line
- Let ABC be an isosceles triangle with $AB = BC$. If base BC is parallel to x -axis and m_1 and m_2 are the slopes of medians drawn through the angular points B and C , then
a) $m_1 m_2 = -1$ b) $m_1 + m_2 = 0$
c) $m_1 m_2 = 2$ d) $m_1 + 2m_2 = 0$