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CLASS: XI- MATHEMATICS

COORDINATE GEOMETRY

1	The coordinates of the points on the line joining the points P(3,-4) and Q(-2,5) that is twice as far from P as from Q are			
	(1,7)	(-1,7)	(-7,14)	(7,14)
2	The slope of the line joining the points on the curve $y = x^2 + 2x$, whose abscissas are 1 and 3 is			
	6	5	4	3
3	The angle between the lines $y = (2-\sqrt{3})x + b$ and $y = (2-\sqrt{3})x + 9$ is			
	$tan^{-1}\left(\frac{\pi}{2}\right)$	$tan^{-1}\left(\frac{\pi}{6}\right)$	$tan^{-1}(\pm\sqrt{3})$	$tan^{-1}(\pm\sqrt{2})$
4	The orthocentre of the triangle whose sides are given by 4x-7y+10=0 ,x+y-5=0 and 7x+4y-15=0 is			
	(-1,-2)	(1,-2)	(-1,2)	(1,2)
5	If the equation $x^2 + kxy + y^2 - 5x - 7y + 6 = 0$ represents a pair of straight lines, then the value of k is			
	5/3	10/3	3/2	3/10
6	The angle between the pair of straight lines $3x^2 + 4xy - 3y^2 = 0$ is			
	60°	90°	$tan^{-1}\left(\frac{4}{3}\right)$	$tan^{-1}\left(\frac{3}{4}\right)$
7	The sides of a triangle are 3x+4y , 4x+3y and 5x +5y units where x>0 ,y>0. The triangle is			
	Right angled	Acute angled	Obtuse angled	isosceles
8	If the second- degree equation $x^2 + 2\sqrt{2}\,xy + 2y^2 + 4x + 4\sqrt{2}\,y + 1 = 0$ represents a pair of straight lines , the distance between them is			
	4	$\frac{4}{\sqrt{3}}$	2	$\frac{2}{\sqrt{3}}$
9	If the pair of straight lines $x^2 - 2pxy - y^2 = 0$ and $x^2 - 2qxy - y^2 = 0$ are such that each pair bisects the angle between the other pair, then			
	P=q	P=-q	P q=1	Pq=-1
10	If the intercept on the straight line y=m x be the lines y = 2 and y = 6 is less than 5, then m belongs to			
	$\left(-\infty, \frac{4}{3}\right) \cup \left(\frac{4}{3}, \infty\right)$	$\left(-\infty, \frac{4}{3}\right)$	$\left(-\frac{4}{3}, \frac{4}{3}\right)$	$\left(-\frac{4}{3}, \infty\right)$
11	Obtain the angle between the lines $\{(x, 0): x \in \mathbb{R}\}$ and $\{(0, y): y \in \mathbb{R}\}$			
	0	$\frac{}{4}$	$\frac{\pi}{2}Z$	π
12	The foot of the perpendicular from (2 , 3) upon the line 4x-5y=8=0 is			
	(0,0)	(1,1)	(41/78 ,128/75)	(78/41 , 128/41)
13	The area of the parallelogram formed by the lines $ax \pm by \pm c = 0$			
	$\frac{c^2}{ab}$	$\frac{2c^2}{ab}$	$\frac{c^2}{2ab}$	None of these
14	The area of the triangle with vertices (a ,b) , $((x_1, y_1)$ and $((x_2, y_2)$ where a , x_1, x_2 *are in G.P. with common ratio* r and b , y_1, y_2 are in G.P. with common ratio s , is			
	ab(r-1)(s-1)(s-r)	½{ab(r+1)(s+1)(s-r)}	½{ab(r-1)(s-1)(s-r)	ab(r+1)(s+1)(r-s)
15	If a,b,c are in A.P. , then the straight line ax + by + c = 0 will always pass through a fixed point whose coordinates are			
	(1,-2)	(-1,2)	(1,2)	(-1,-2)

16	The product of the perpendicular from (α, β) to the lines a$x^2 + 2hxy + by^2 = 0$ is			
	$\frac{a\alpha^2 + 2h\alpha\beta + b\beta^2}{\sqrt{4h^2 + (a-b)^2}}$	$a\alpha^2 - 2h\alpha\beta + b\beta^2$ $-\sqrt{4h^2 - (a-b)^2}$	$\frac{a\alpha^2 - 2h\alpha\beta + b\beta^2}{\sqrt{4h^2 - (a-b)^2}}$	None of these
17	The centroid of the triangle formed by the lines $(x^2 + 7xy + 2y^2)(y-1)$ = 0 is			
	$\left(-\frac{7}{3}, -\frac{2}{3}\right)$	$\left(-\frac{7}{3}, \frac{2}{3}\right)$	$\left(\frac{7}{3}, -\frac{2}{3}\right)$	$\left(\frac{7}{3}, \frac{2}{3}\right)$
18	The angle between tangents drawn from P to the circle $x^2 + y^2 + 4x - 6y + 9sin^2\theta + 13cos^2\theta = 0$ is 2θ. The locus of point P is			
	$x^2 + y^2 + 4x - 6y$ $- 9 = 0$	$x^2 + y^2 + 4x - 6y$ $- 4 = 0$	$x^2 + y^2 + 4x - 6y + 9$ $= 0$	$x^2 + y^2 + 4x - 6y + 4$ $= 0$
19	The length of the common chord of the two circles $(x-a)^2 + (y-b)^2 = c^2$ and $(x-b)^2 +$ $(y-a)^2 = c^2$ is			
	$\sqrt{4c^2 + 2(a-b)^2}$	$\sqrt{4c^2 - (a-b)^2}$	$\sqrt{4c^2 - 2(a-b)^2}$	$\sqrt{\sqrt{2c^2 - 2(a-b)^2}}$
20	The length of the diameter of the circle which touches the x axis at the point (1,0) and passes through the point (2,3) is			
	10/3	3/5	6/5	5/3