



MATHS

BOOKS - VGS BRILLIANT MATHS

(TELUGU ENGLISH)

**COORDINATE GEOMETRY (MULTIPLE
CHOICE QUESTION)**

Coordinate Geometry Multiple Choice Question

1. Find the perpendicular distance of that point $(3,-4)$ from the line $2x - 5y + 2 = 0$.

A. $\frac{28}{\sqrt{29}}$ units

B. $\sqrt{29}$ units

C. 28 units

D. None

Answer: A



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2. Write the equation

$$x \cos \frac{\pi}{4} + y \sin \frac{\pi}{4} + 2 = 0 \text{ in the intercept}$$

form.....

A. $\frac{x}{2\sqrt{2}} + \frac{y}{2} = 1$

B. $\frac{x}{-2\sqrt{2}} + \frac{y}{2\sqrt{2}} = 1$

C. $\frac{x}{2} + \frac{y}{3} = 1$

D. $\frac{x}{5\sqrt{2}} + \frac{y}{5\sqrt{2}} = 1$

Answer: B



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3. Find the area of Δ^{le} formed by the straight line $x \cos \alpha + y \sin \alpha = p$ on the co-ordinate axes.

A. $\frac{p^2}{\cos \alpha}$

B. $p^2 \cdot \operatorname{cosec} 2\alpha \text{sq. units}$

C. $\frac{p^2}{\sin 2\alpha} \text{sq. units}$

D. 0

Answer: C



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4. Find the distance between the parallel lines

$$3x - 4y = 12 \text{ and } 3x - 4y = 7$$

A. 1 unit

B. 2 units

C. 3 units

D. 0

Answer: A



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5. Find the incentre of the Δ^{le} with the vertices $(1, \sqrt{3}), (0,0)$ and $(2,0)$

A. $(1, \sqrt{3})$

B. $(\sqrt{3}, -\sqrt{3})$

C. $\left(1, \frac{1}{\sqrt{3}}\right)$

D. $(1,1)$

Answer: C



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6. Line L has intercepts a and b on the coordinate axes. When the axes are rotated through a fixed given angle keeping the origin fixed, the same line L has intercepts P and q, then

A. $\frac{1}{p^2} + \frac{1}{q^2}$

B. $\frac{1}{p^2} - \frac{1}{q^2}$

C. $p^2 + q^2 = 1$

D. None

Answer: A



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7. Find the value of 'a' such that $a^2 + 2a$, $2a+3$ and $a^2 + 3a + 8$ are the sides of the Δ^{le} .

A. $a=5$

B. $a > 5$

C. $a < 5$

D. $a < 4$

Answer: B



8. Find the equation of a straight line passing through the point $P(3,4)$ such that the portion between the axes is divided by P in the ratio 2:3.

A. $2x - y = 10$

B. $2x + 3y = 10$

C. $2x + y = 10$

D. $4x + 5y = 10$

Answer: C



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9. The co-ordinates of the vertex of a square ABCD are (1,2) and the equation of the diagonal BD is $x+2y=10$. Find the equation of other diagonal and the co-ordinates of the centre of the square.

A. $y - 2x = 0$

B. $2x + y = 0$

C. $x + y = 0$

D. None

Answer: A



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10. IF $y + x(2p + 1) + 3 = 0$ and

$8y - x(2p - 1) - 5 = 0$ are perpendicular

find p.

A. $\pm \frac{2}{3}$

B. $\pm \frac{3}{2}$

C. ± 3

D. ± 4

Answer: B



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11. IF $3(k - 1)y - 6x = 2$ and $4y - 8x + 10 = 0$ are parallel then find k.

A. 1

B. -2

C. 2

D. 0

Answer: C



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12. IF $2y - p^2x = 3$ and $2y - (4px + 1) = 0$

are parallel find the value of p.

A. 1

B. 2

C. 3

D. 4

Answer: D



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13. IF the points $(a,1)$, $(1,2)$ and $(0,b+1)$ are

collinear. Then $\frac{1}{a} + \frac{1}{b} = \dots\dots\dots$

A. 1

B. 2

C. -2

D. -1

Answer: A



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14. Find the gradient of the line joining the pair of points $(\sqrt{3} + 1, 2)$, $(\sqrt{3} + 3, 4)$.

A. -1

B. 1

C. 2

D. -2

Answer: B



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15. If the points $P=(a,2), Q=(1,3)$ and $R=(5,b)$ are such that $PQ=QR$. Find 'a' and 'b' if P,Q and R are collinear.

A. $a=-3, b=2$

B. $a=3, b=4$

C. $a=-3, b=4$

D. $a=1, b=2$

Answer: C



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16. Find the co-ordinates of incentre of the triangle whose vertices are $(-36,7)$, $(20,7)$ and $(0,-8)$

A. $(-1,0)$

B. $(1,2)$

C. $(-1,-2)$

D. $(4,5)$

Answer: A



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17. The three vertices of Rhombus are $(2,-1)$, $(3,4)$ and $(-2,3)$. Find the fourth vertex.

A. $(-1,-2)$

B. $(-3,-2)$

C. $(1,2)$

D. $(0,0)$

Answer: B



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18. Find the ratio in which the point $A=(16,-8)$ divides the line segment joining $B=(1,2)$ and $C=(10,-4)$.

A. 5: - 2

B. 1: 2

C. 5: 2

D. 3: 4`

Answer: A



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19. IF the distance of the point $P(x,y)$ from $A=(a,0)$ be $(a+x)$ then $y^2=.....$

A. 4

B. 4a

C. 4ax

D. x

Answer: C



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20. IF the point $P(x,y)$ be equidistant from the point $A=(m+n,n-m)$,

$B=(m-n,m+n)$ then $nx=.....$

A. my

B. m

C. y

D. none

Answer: A



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21. Find the distance between the two points

$$(at_1^2, 2at_1), (at_2^2, 2at_2^2), t_2 > t_1.$$

A. $a. (t_2 - t_1) \cdot \sqrt{(t_1 + t_2)^2 + 4}$

B. $(t_2 - t_1) \sqrt{(t_1 + t_2)^2 - 4}$

C. $(t_2 - t_1) \sqrt{4(t_1 + t_2)}$

D. None

Answer: A



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22. Find the equation of the line passing through the point $(4,5)$ and making an angle of $\frac{\pi}{4}$ with the line $2x - y + 7 = 0$.

A. $x + 3y + 10 = 0$

B. $x - 3y + 11 = 0$

C. $2x + 3y + 4 = 0$

D. $x + y + 1 = 0$

Answer: B



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23. A line passes through the point (22,-6). IF the intercept on the x-axis exceeds the intercept on the y-axis by 5. Find its equation.

A. $x + 2y = 3$

B. $5x + 45y = 7$

C. $6x + 11y = 66$

D. $x + y + 1 = 0$

Answer: C



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24. IF the points

$A(1 + t, 1)$, $B(1 + 2t, 3)$, $C(2t + 2, 2t)$ are

collinear find 't'.

A. 1

B. -1

C. -2

D. $-\frac{1}{2}$

Answer: D



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25. The straight line $x+y=0$, $3x+y-4=0$ and $x+3y-4=0$ form a triangle which is

A. Isosceles

B. Right angle

C. Equilateral

D. Scalene triangle

Answer: A



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26. The vertices of a Δ^{le} are $A=(-2,8)$, $B=(1,2)$, $C=(7,-1)$. Find the equation of median through A.

A. $5x + 4y = 22$

B. $x + y + 1 = 0$

C. $2x + 3y = 0$

D. None

Answer: A



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27. If the three vertices of a Rectangle are the points $(2,-2)$, $(8,4)$ and $(5,7)$ find the co-ordinates of fourth vertex.

A. (-1,1)

B. (1,-1)

C. (0,0)

D. (1,2)

Answer: A



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28. Given $\frac{1}{a} + \frac{1}{b} = k$, find the fixed point

which passes through the straight line

$$\frac{x}{a} + \frac{x}{b} = 1$$

A. (1,1)

B. (k,k)

C. $\left(\frac{1}{k}, \frac{1}{k}\right)$

D. (0,0)

Answer: C



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29. IF a, b, c are in A.P then the straight line $ax + by + c = 0$ will always pass through a fixed point. Find it.

A. (1,2)

B. (1,-2)

C. (2,3)

D. (0,0)

Answer: B



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30. A line is such that its segment between the axes is bisected at the point $(x_1 : y_1)$ Find the equation of that line.

A. $\frac{x}{2x_1} + \frac{y}{2y_1} = 1$

B. $\frac{x}{2} + \frac{y}{3} = 1$

C. $ax + by = c$

D. $y^2 = 4ax$

Answer: A



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