Co-ordinate Geometry Practice

30 Minutes – (Don't skip any questions)

1) In XY co-ordinate system if (a, b) and $(a + 3, b + k)$ are two points on line defined by the equation $x = 3y - 7$, then $k =$?

A. a B. 3 C. $7/3$ D. 1 E. $1/3$

2) If points $(0, -3), (6, 0)$ and $(k, 10)$ all lie on the same line, what is the value of k?

A. 2 B. 8 C. 14 D. 22 E. 26

3) Three vertices of a square are at $(-1, -1), (-2, 3)$ and $(3, 0)$. What are the coordinates of the 4^{th} vertex?

A. $(1,3)$ B. $(1,4)$ C. $(2,5)$ D. $(2,4)$ E. $(3,4)$

4) The points $A(0,6), B(-5,3)$ and $C(3,1)$ are the vertices of a triangle which is

A. $Equilatral\ triangle$
B. $Right\ angled\ triangle$
C. $Right\ angled\ Isosceles\ triangle$
D. $Isosceles\ triangle$
E. $None\ of\ these$

5) What point on X–axis is equidistant from the points $A(7, 6)$ and $B(-3, 4)$?

A. $(0,4)$ B. $(-4,0)$ C. $(3,0)$ D. $(-3,0)$ E. $(0,0)$

6) Which of the following is the best approximation of the perimeter of a triangle with vertices at $(1, 4), (1, 1)$ and $(3, 2)$?

A. 5 B. 6 C. 6.5 D. 7 E. 8

7) The three lines $y = x + 2, y = -2x + 20$, and $y = 4$ form the boundary of a triangle in the xy-plane. What is the area of this triangle?

A. 9 B. 10 C. 12 D. $6\sqrt{2}$ E. $5\sqrt{3}$

8) In the rectangular coordinate plane, point A has coordinates $(-4, 0)$, point B has coordinates $(0, 4)$, point C has coordinates $(4, 0)$, and point D has coordinates $(0, -4)$. What is the area of quadrilateral ABCD?

A. 8 B. 16 C. 24 D. 32 E. 64

9) The line $2x + 3y = 6$ meets x-axis at the point

A. $(0,3)$ B. $(0, -3)$ C. $(6,0)$ D. $(-3,0)$ E. $(3,0)$

10) The value of β so that the lines $x + 2y - 9 = 0$ and $\beta x + 4y + 5 = 0$ are parallel is:

A. 2 B. -1 C. 1 D. 0 E. -2

11) The intercepts made by the line $3x - 2y - 6 = 0$ with x-axis and y-axis respectively are:

A. $3\ and\ 2$ B. $2\ and\ 3$ C. $2\ and\ -3$ D. $-2\ and\ 3$ E. $-2\ and\ -3$

12) The lines whose equations are $3x - 7y + 9 = 0$ and $9x - 21y + 27 = 0$ are:

A. $Parallel$
B. $Perpendicular$
C. $Coincident$
D. $Intersecting$
E. $None\ of\ these$

13) The equation of the line parallel to y-axis and passing through $(3, -7)$ is:

A. $y = -7$ B. $x = 3$ C. $y = 3x$ D. $y = -7x$ E. $None$

14) Isosceles triangle ABC has an area of 4 sq. units and lies in the 1st quadrant. If the co-ordinates of A and C are (2,0) and (4,0) respectively, and AB = BC, then the co-ordinates of the vertex B are:

A. $(3,2)$ B. $(3,4)$ C. $(4,4)$ D. $(4,3)$ E. $(0,3)$

15) Point $A(2,1)$ is the center of the given circle and $B(2,6)$ lies on the circle. Point C lies on the circle in the 2nd quadrant. What are the co-ordinates of C?

A. $(1, -4)$ B. $(-5,1)$ C. $(-4,1)$ D. $(-3,1)$ E. $(-2,1)$

16) 2 points $A(0,5a)$ and $B(3a, 0)$ lie on the line L. Find the slope of line L.

A. 0 B. $3/5$ C. $-5/3$ D. $5/3$ E. $-3/5$