

SARALA BIRLA PUBLIC SCHOOL

Birla Knowledge City, Mahilong, Ranchi

CLASS-X, (2020-21)

Sub: Mathematics

Assignment-5

Choose the correct option:

- The maximum value of $\sin \theta$ is :
A. $\frac{1}{2}$ B. $\frac{\sqrt{3}}{2}$ C. 1 D. $\frac{1}{\sqrt{2}}$
- If in a ΔABC , $\angle B = 90^\circ$, $AB = 12$ cm and $BC = 5$ cm, then the value of $\sec C$ is
A. $\frac{13}{5}$ B. $\frac{5}{12}$ C. $\frac{12}{5}$ D. $\frac{5}{13}$
- If $\cos \theta = \frac{1}{2}$, then the value of $\frac{\cot \theta + \tan \theta}{\operatorname{cosec} \theta}$ is
A. 1 B. 3 C. 4 D. 2
- If $\sin \theta = \cos \theta$, then the value of $2 \tan \theta + \cos^2 \theta$ is
A. $\frac{2}{5}$ B. $\frac{5}{2}$ C. $\frac{3}{2}$ D. $\frac{7}{2}$
- In a ΔABC , right angled at C, the value of $\cos (A + B)$ is
A. 1 B. $\frac{1}{2}$ C. 0 D. $\frac{1}{3}$
- If A is an acute angle of a ΔABC , right angled at B, then the value of $\sin A + \cos A$ is
A. equal to one C. less than one
B. greater than one D. equal to two
- The pair satisfying $2x + y = 6$ is
A. (1, 2) B. (2, 1) C. (2, 2) D. (1, 1)
- The pair of equations $x = 0$, $y = 0$ represents
A. parallel lines C. perpendicular lines
B. coincident lines D. none of these
- If the line $y = px - 2$ passes through the point (3, 2), then the value of p is
A. $\frac{3}{4}$ B. $\frac{4}{3}$ C. 3 D. 4
- If one linear equation is $2x - 3y + 5 = 0$, then the other linear equation to have parallel line as its geometrical construction will be
A. $4x - 6y + 10 = 0$ C. $8x - 12y + 20 = 0$
B. $6x - 9y + 15 = 0$ D. $4x - 6y + 15 = 0$
- Find the value of y if
 $y = \frac{1}{2}x$ and $3x + 4y = 20$
A. 1 B. 2 C. 3 D. 4
- Find the value of k for which the system of equations
 $x - ky = 2$
 $3x + 2y = -5$
has a unique solution.
A. $k = \frac{2}{3}$ B. $k \neq -\frac{2}{3}$ C. $k = \frac{3}{2}$ D. $k \neq -\frac{3}{2}$

13. PROJECT WORK : Lab Activity – 1.3 (to be done in lab activity book)