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Class $\mathbf{- 1 2}^{\text {th }}$
Worksheet-20

Chapter-5

## Subject Maths

Inverse of a Matrix and Linear Equations

1. Find the area of the triangle whose vertices are $A(2,3), B(-5,4)$ and $C(4,3)$
2. If points $(x,-2),(5,2),(8,8)$ are collinear then find the value of $x$.
3. Prove that $[b c, a(b+c)],[c a, b(c+a)]$ and $[a b, c(a+b]$ are collinear.
4. Find the equation of line joining the points $A(4,3)$ and $B(-5,2)$ also find the value of $k$ if the area of the triangle $A B C$ is 2 Sq. units where, $C(k, 0)$.
5. If the solution of two below given equation is possible then solve using the Cramer's rule.
(i) $2 x-3 y=3$
$2 x+3 y=9$
(ii) $x+2 y=5$
$2 x+4 y=10$
6. Prove that the system of equations is inconsistent with no solution.

$$
\begin{array}{r}
x+y+z=2 \\
x+2 y+3 z=5 \\
2 x+3 y+4 z=11 .
\end{array}
$$

