Exercise 1.4

1. Draw the graph of the line $x - 2y = 3$. From the graph, find the coordinates of the points when (i) $x = -5$, (ii) $y = 0$.
2. Draw the graph of the following equations:
   (i) $3x - y = 5$ (ii) $3x - 4y - 12 = 0$
3. Draw the graph of the equation $2x + 3y - 6 = 0$ and determine from the graph whether $x = 3$, $y = 0$ is a solution or not. Also from the graph find the value of x when $y = 4$. [*CBSE* 2011]
4. Draw the graph of each of the following system of linear equations and find whether each of these systems has a unique solution or not.
   (i) $3x + y + 1 = 0$
   $2x - 3y + 8 = 0$
   (ii) $x + y = 3$
   $2x + 5y = 12$
5. Use single graph paper, draw the graph of each of the following equations $y = x$, $y = -x$ and $2x + 3y = 6$. Shade the triangle formed by these lines.
6. Use a single graph paper and draw the graph of the following equations: $2y - x = 8$, $5y - x = 14$, $y - 2x = 1$. Obtain the vertices of the triangle so obtained.

Answers

1. (i) When $x = -5$, $y = -4$ (ii) When $y = 0$, $x = 3$
3. Yes; $x = -3$ 4. (i) Yes; $x = -1$, $y = 2$ (ii) Yes; $x = 1$, $y = 2$
6. $(1, 3)$, $(-4, 2)$, $(2, 5)$