

EduSahara™ Learning Center Assignment

Grade : Class X, SSC

Chapter : Coordinate Geometry

Name : Equation of a Straight Line

1. The equation of the line passing through the origin and having a slope $m \neq 0$ is

- (i) $y = 0$ (ii) $y = mx$
 (iii) $y = mx + c$ (iv) $x = 0$
 (v) $x = my + c$

2. The equation of the line with slope $m \neq 0$ and y-intercept $c \neq 0$ is

- (i) $x = my + c$ (ii) $y = mx + c$
 (iii) $x = 0$ (iv) $y = mx$
 (v) $y = 0$

3. Find the y-intercept of the line $(-2x - 2y - 8) = 0$

- (i) -3 (ii) -6 (iii) -1 (iv) -4 (v) -5

4. Any line parallel to x-axis is

- (i) a curved line (ii) a horizontal line (iii) an oblique line (iv) a vertical line

5. Any line parallel to y-axis is

- (i) an oblique line (ii) a vertical line (iii) a curved line (iv) a horizontal line

6. A line which is neither parallel to x-axis nor y-axis is

- (i) a curved line (ii) a horizontal line (iii) an oblique line (iv) a vertical line

7. Which of the following are true?

- a) The ordinate of every point on x-axis is zero
 b) The ordinate of every point on y-axis is zero
 c) The abscissa of every point on y-axis is zero
 d) The abscissa of every point on x-axis is zero
 (i) {a,c} (ii) {b,d,a} (iii) {b,c,a} (iv) {d,c} (v) {b,a}

8. Equation of the line passing through a given point (x_1, y_1) and having slope m is

- a) None of the above
 b) $(y - y_1) = m(x - x_1)$
 c) $y - y_1 = m(x - x_1)$

$$\begin{pmatrix} - \\ 1 \end{pmatrix} = \begin{pmatrix} - \\ 1 \end{pmatrix}$$

d) $(y - x_1) = m(x - y_1)$

(i) {a,b} (ii) {c,b} (iii) {b} (iv) {d,a,b}

9. The coordinates of the origin are

(i) $(-8, 0)$ (ii) $(0, 1)$ (iii) $(-1, 0)$ (iv) $(0, 0)$ (v) $(-1, 1)$

10. The point of intersection of x-axis and y-axis

(i) $(-1, 1)$ (ii) $(0, 0)$ (iii) $(0, 1)$ (iv) $(-1, 0)$ (v) $(-7, 0)$

11. The line $(22x + 16y - 31) = 0$
bisects which of the following pairs of points?

(i) $((-5), 2), (4, 8)$ (ii) $((-6), (-1)), (4, 8)$ (iii) $((-9), (-2)), (4, 8)$
(iv) $((-7), 0), (4, 8)$ (v) $((-7), 0), (3, 9)$

12. Which of the following lines pass through the origin?

(i) $(-12x + y - 42) = 0$
(ii) $(7x - 35) = 0$
(iii) $(3x - 9y - 42) = 0$
(iv) $(2x + 8y - 42) = 0$
(v) $(4x - 5y) = 0$

13. Which of the following lines do not pass through the origin?

(i) $(-6x + 6y + 18) = 0$
(ii) $(-4x + y) = 0$
(iii) $(x + 5y) = 0$
(iv) $(-4x - 4y) = 0$
(v) $(7x - y) = 0$

14. Find the set of points satisfying the equation $(-10x - 6y + 24) = 0$

(i) $((-2), \frac{22}{3}), ((-1), \frac{17}{3}), (0, 4), (0, \frac{10}{3}), (2, \frac{2}{3})$
(ii) $((-2), \frac{22}{5}), ((-1), \frac{17}{5}), (1, 3), (1, \frac{7}{5}), (2, \frac{2}{5})$

- (iii) $((-2), \frac{22}{3}), ((-1), \frac{17}{3}), (0, 4), (1, \frac{7}{3}), (2, \frac{8}{3})$
- (iv) $((-2), \frac{22}{3}), ((-1), \frac{17}{3}), ((-2), 2), (1, \frac{7}{3}), (2, \frac{2}{3})$
- (v) $((-2), \frac{22}{3}), ((-1), \frac{17}{3}), (0, 4), (1, \frac{7}{3}), (2, \frac{2}{3})$
-

15. Find the set of points satisfying the equation $y = (-14x - 35)$

- (i) $((-2), (-7)), ((-1), (-21)), (0, (-35)), (0, (-48)), (2, (-63))$
- (ii) $((-2), (-7)), ((-1), (-21)), (0, (-35)), (1, (-49)), (2, (-63))$
- (iii) $((-2), (-7)), ((-1), (-21)), (0, (-35)), (1, (-49)), (4, (-61))$
- (iv) $((-2), (-7)), ((-1), (-21)), (1, (-36)), (1, (-49)), (2, (-63))$
- (v) $((-2), (-7)), ((-1), (-21)), ((-2), (-37)), (1, (-49)), (2, (-63))$
-

16. Find the set of points satisfying the equation $x = (-\frac{3}{13}y + \frac{53}{13})$

- (i) $((-2), \frac{79}{3}), ((-1), 22), ((-2), \frac{47}{3}), (1, \frac{40}{3}), (2, 9)$
- (ii) $((-2), \frac{79}{3}), ((-1), 22), (0, \frac{53}{3}), (0, \frac{43}{3}), (2, 9)$
- (iii) $((-2), \frac{79}{3}), ((-1), 22), (0, \frac{53}{3}), (1, \frac{40}{3}), (2, 9)$
- (iv) $((-2), \frac{79}{3}), ((-1), 22), (0, \frac{53}{3}), (1, \frac{40}{3}), (4, 11)$
- (v) $((-2), \frac{79}{3}), ((-1), 22), (1, \frac{50}{3}), (1, \frac{40}{3}), (2, 9)$
-

17. Find the set of points satisfying the equation $y = \frac{8}{3}x$

- (i) $((-2), (-\frac{16}{3})), ((-1), (-\frac{8}{3})), ((-2), (-2)), (1, \frac{8}{3}), (2, \frac{16}{3})$
- (ii) $((-2), (-\frac{16}{3})), ((-1), (-\frac{8}{3})), (0, 0), (1, \frac{8}{3}), (4, \frac{22}{3})$
- (iii) $((-2), (-\frac{16}{3})), ((-1), (-\frac{8}{3})), (1, (-1)), (1, \frac{8}{3}), (2, \frac{16}{3})$
- (iv) $((-2), (-\frac{16}{3})), ((-1), (-\frac{8}{3})), (0, 0), (0, \frac{11}{3}), (2, \frac{16}{3})$
- (v) $((-2), (-\frac{16}{3})), ((-1), (-\frac{8}{3})), (0, 0), (1, \frac{8}{3}), (2, \frac{16}{3})$
-

18. Find the set of points satisfying the equation $(48x + 7y - 6) = 0$

- (i) $((-2), \frac{102}{7}), ((-1), \frac{54}{7}), (0, \frac{6}{7}), (0, (-5)), (2, (-\frac{90}{7}))$
- (ii) $((-2), \frac{102}{7}), ((-1), \frac{54}{7}), (0, \frac{6}{7}), (1, (-6)), (2, (-\frac{90}{7}))$
- (iii) $((-2), \frac{102}{7}), ((-1), \frac{54}{7}), (1, (-\frac{1}{7})), (1, (-6)), (2, (-\frac{90}{7}))$

$$2 \quad / \quad 1 \quad / \quad 1 \quad / \quad 1 \quad 6 \quad 2 \quad /$$

$$(iv) \left((-2), \frac{102}{7} \right), \left((-1), \frac{54}{7} \right), \left((-2), \left(-\frac{8}{7} \right) \right), \left(1, (-6) \right), \left(2, \left(-\frac{90}{7} \right) \right)$$

$$(v) \left((-2), \frac{102}{7} \right), \left((-1), \frac{54}{7} \right), \left(0, \frac{6}{7} \right), \left(1, (-6) \right), \left(4, \left(-\frac{76}{7} \right) \right)$$

19. Find the set of points satisfying the equation $y = 5$

$$(i) \left((-2), 5 \right), \left((-1), 5 \right), (0, 5), (0, 6), (2, 5)$$

$$(ii) \left((-2), 5 \right), \left((-1), 5 \right), (1, 4), (1, 5), (2, 5)$$

$$(iii) \left((-2), 5 \right), \left((-1), 5 \right), (0, 5), (1, 5), (2, 5)$$

$$(iv) \left((-2), 5 \right), \left((-1), 5 \right), (0, 5), (1, 5), (4, 7)$$

$$(v) \left((-2), 5 \right), \left((-1), 5 \right), \left((-2), 3 \right), (1, 5), (2, 5)$$

20. Find the set of points satisfying the equation $x = (-3)$

$$(i) \left((-3), (-2) \right), \left((-3), (-1) \right), \left((-2), (-1) \right), \left((-3), 1 \right), \left((-3), 2 \right)$$

$$(ii) \left((-3), (-2) \right), \left((-3), (-1) \right), \left((-3), 0 \right), \left((-4), 2 \right), \left((-3), 2 \right)$$

$$(iii) \left((-3), (-2) \right), \left((-3), (-1) \right), \left((-3), 0 \right), \left((-3), 1 \right), \left((-1), 4 \right)$$

$$(iv) \left((-3), (-2) \right), \left((-3), (-1) \right), \left((-3), 0 \right), \left((-3), 1 \right), \left((-3), 2 \right)$$

$$(v) \left((-3), (-2) \right), \left((-3), (-1) \right), \left((-5), (-2) \right), \left((-3), 1 \right), \left((-3), 2 \right)$$

Which of the following equations satisfy the given points

21. $\left((-2), (-1) \right), \left((-1), (-2) \right), (0, (-3)), (1, (-4)), (2, (-5))$?

$$(i) (5x + 7y - 2) = 0$$

$$(ii) (-12x - 12y - 36) = 0$$

$$(iii) y = (-5)$$

$$(iv) y = (-x - 3)$$

$$(v) x = 2$$

Which of the following equations satisfy the given points

22. $\left((-2), 3 \right), \left((-1), 2 \right), (0, 1), (1, 0), (2, (-1))$?

$$(i) (-13x - 13y) = 0$$

$$(ii) y = (-x + 1)$$

$$(iii) =$$

$$x = 5$$

$$(iv) \quad (5x + 8y - 4) = 0$$

$$(v) \quad x = (y + 9)$$

Which of the following equations satisfy the given points

$$23. \quad ((-2), \frac{5}{3}), ((-1), \frac{1}{1}), (0, \frac{1}{3}), (1, (-\frac{1}{3})), (2, (-1)) ?$$

$$(i) \quad (2x + 3y - 1) = 0$$

$$(ii) \quad y = (-2)$$

$$(iii) \quad x = (\frac{6}{13}y - \frac{105}{13})$$

$$(iv) \quad y = (-\frac{6}{13}x - \frac{80}{13})$$

$$(v) \quad (-6x - 13y - 29) = 0$$

Which of the following equations satisfy the given points

$$24. \quad ((-2), (-5)), ((-1), (-5)), (0, (-5)), (1, (-5)), (2, (-5)) ?$$

$$(i) \quad (9x + 4y - 2) = 0$$

$$(ii) \quad (-9x - 8y - 6) = 0$$

$$(iii) \quad x = (\frac{9}{8}y - \frac{27}{8})$$

$$(iv) \quad y = (-5)$$

$$(v) \quad y = (-\frac{9}{8}x - \frac{121}{8})$$

Which of the following equations satisfy the given points

$$25. \quad ((-6), (-2)), ((-6), (-1)), ((-6), 0), ((-6), 1), ((-6), 2) ?$$

$$(i) \quad y = (-1)$$

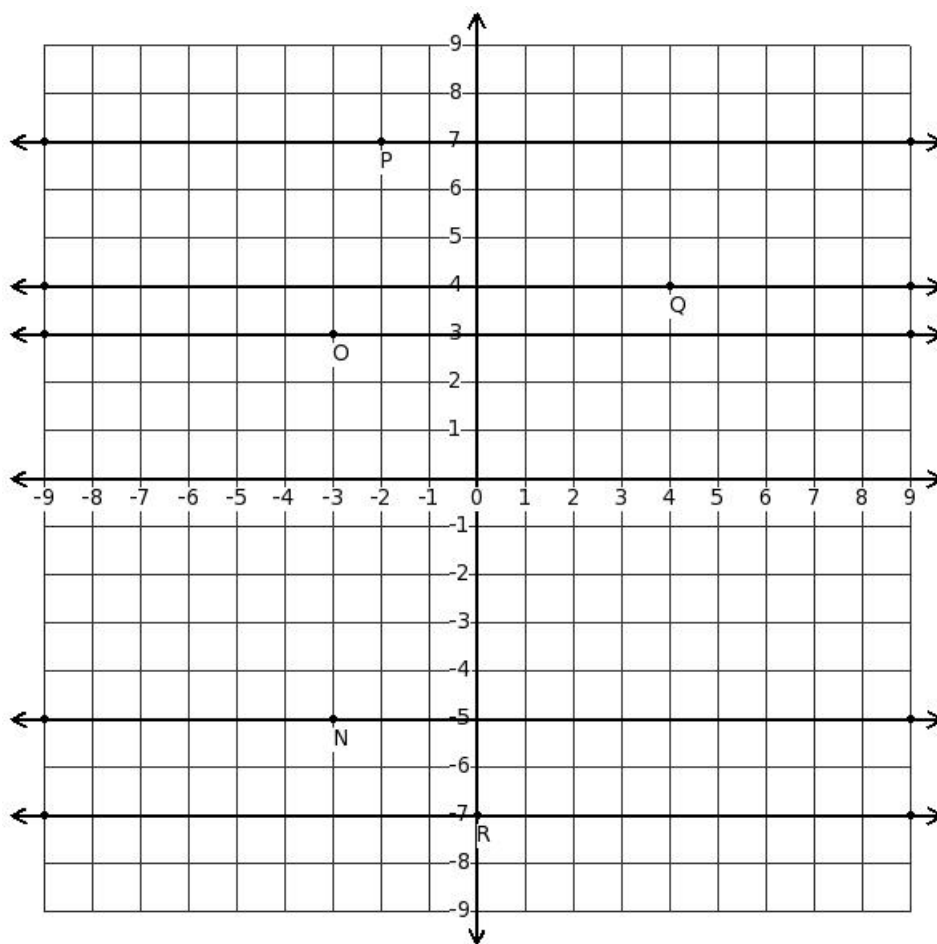
$$(ii) \quad x = (\frac{11}{4}y - \frac{13}{4})$$

$$(iii) \quad (-11x - 4y - 17) = 0$$

$$(iv) \quad (8x + 9y - 6) = 0$$

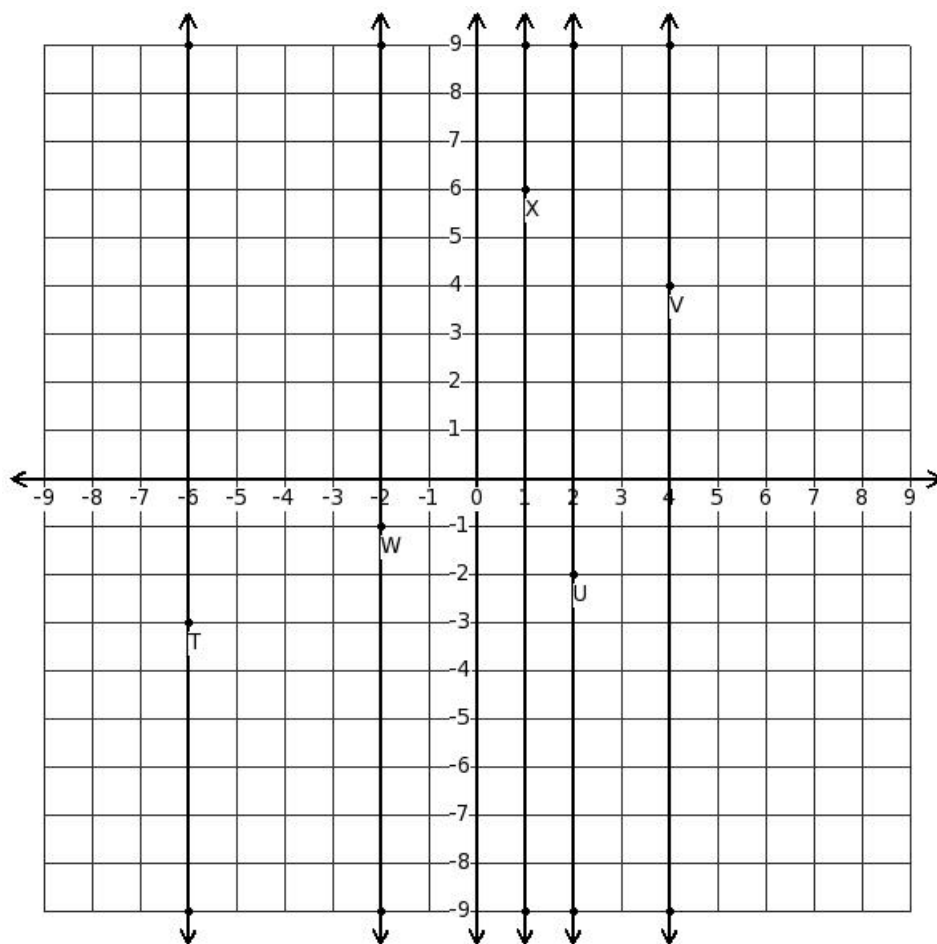
$$(v) \quad x = (-6)$$

$$26. \quad \text{Which of the displayed lines represent the equation } y = (-5)$$



- (i) line with point Q
- (ii) line with point N
- (iii) line with point P
- (iv) line with point O
- (v) line with point R

27. Which of the displayed lines represent the equation $x = (-6)$



- (i) line with point X
 - (ii) line with point T
 - (iii) line with point U
 - (iv) line with point V
 - (v) line with point W
-

Assignment Key

- 1) (ii)
- 2) (ii)
- 3) (iv)
- 4) (ii)
- 5) (ii)
- 6) (iii)
- 7) (i)
- 8) (iii)
- 9) (iv)
- 10) (ii)
- 11) (iv)
- 12) (v)
- 13) (i)
- 14) (v)
- 15) (ii)
- 16) (iii)
- 17) (v)
- 18) (ii)
- 19) (iii)
- 20) (iv)
- 21) (ii)
- 22) (ii)
- 23) (i)
- 24) (iv)
- 25) (v)
- 26) (ii)
- 27) (ii)