EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Equation of a Straight Line

Grade : ICSE Grade X

1. The equation of x-axis is

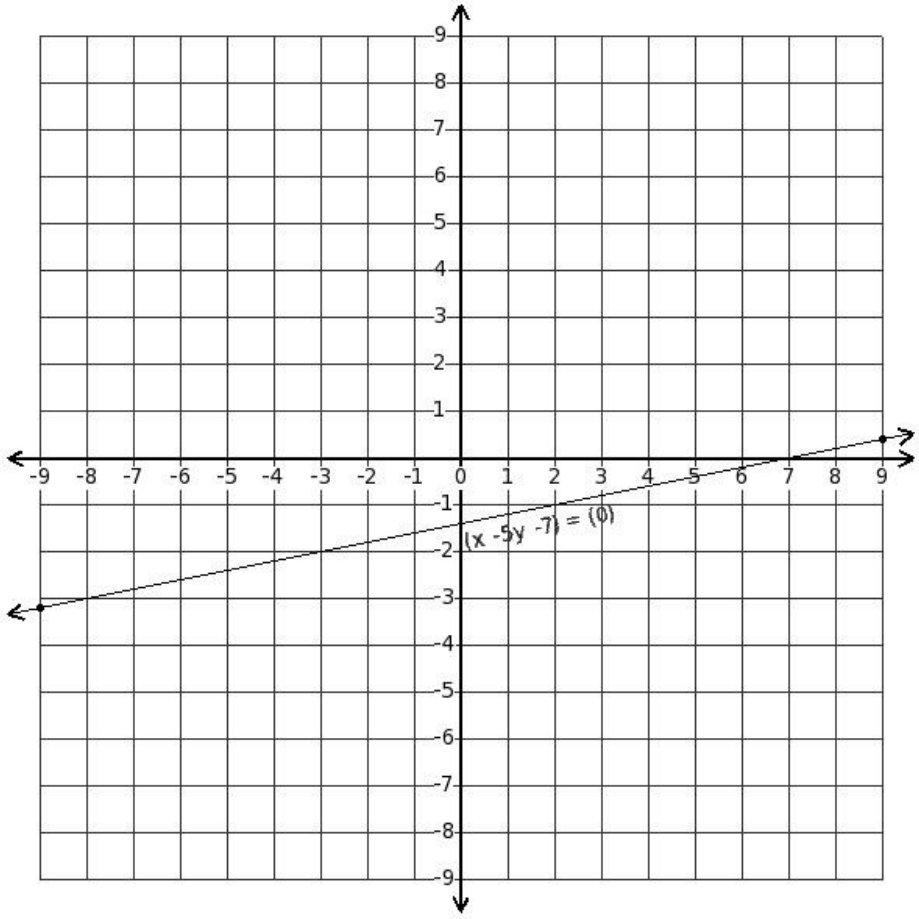
   (i) $y=1$ (ii) $x=0$ (iii) $x=1$ (iv) $y=x$ (v) $y=0$

2. Which of the following are true?

   a) Slope of any line parallel to y-axis is zero
   b) Slope of any line parallel to x-axis is zero
   c) Slope of any line parallel to y-axis is not defined
   d) Slope of any line parallel to x-axis is not defined

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

3. Find the equation perpendicular to the given equation



   (i) $(-5x+y-14)=0$ (ii) $(x-5y)=0$ (iii) $(5x+y-10)=0$ (iv) $(-x+5y+7)=0$

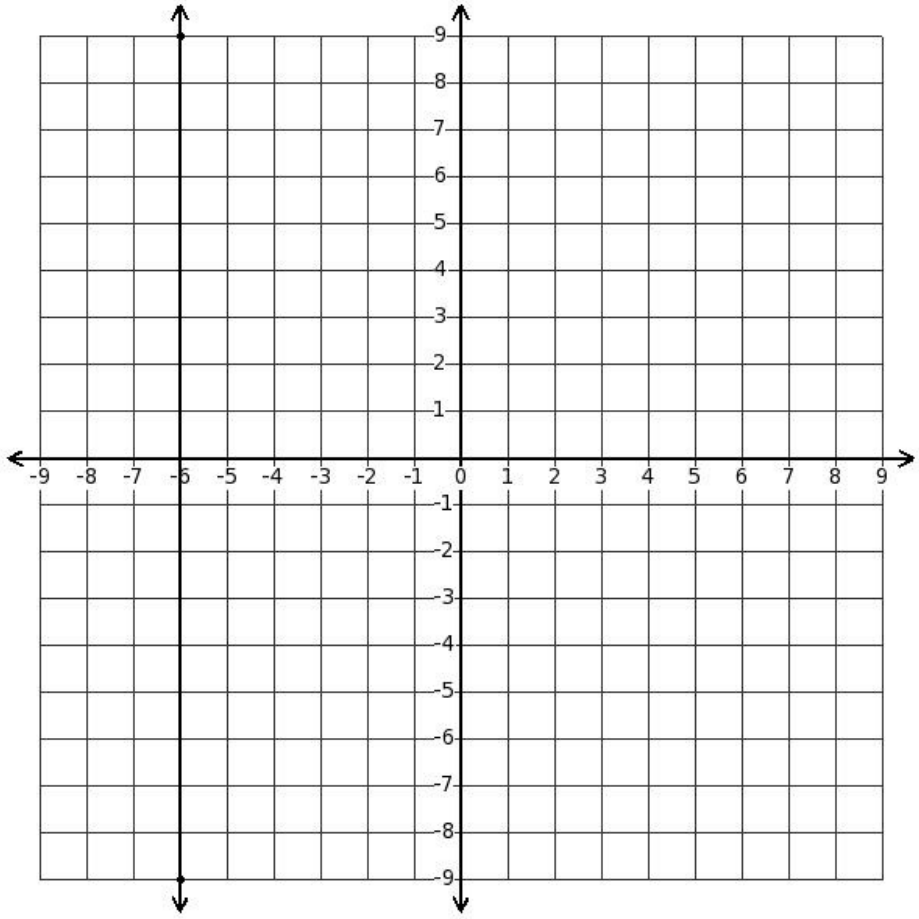
4. The points B(3,4) and D((−5),6) are the opposite vertices of a square ABCD. Find the equation of the diagonal AC

   (i) $(7x-2y+18)=0$ (ii) $(8x-2y+18)=0$ (iii) $(2x+5y-38)=0$ (iv) $(2x+8y-38)=0$ (v) $(8x+18)=0$

5. Find the equation of a straight line parallel to y-axis and passing through the point (0,5)

   (i) $x=3$ (ii) $y=8$ (iii) $x=(-1)$ (iv) $x=0$ (v) $y=5$

6. Find the equation of the displayed line



(i) $x=(-7)$ (ii) $y=(-6)$ (iii) $x=(-5)$ (iv) $3x=(-6)$ (v) $x=(-6)$

7. Which of the following are true ?

a) Equations of two parallel lines differ in the constant term only, coefficients of x and y will be same
b) Equations of two parallel lines have the same constant and coefficients of x and y will be same
c) Equations of two parallel lines differ in the constant and coefficients of x and y will not be same
d) Equations of two parallel lines have the same constant and coefficients of x and y will not be same

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

8. The equation of the line with x-intercept $\frac{2}{6}$ and y-intercept $\frac{7}{8}$ is

(i) $(8x+21y-7)=0$ (ii) $(21x+32y-28)=0$ (iii) $(45x+32y-60)=0$ (iv) $(45x+8y-15)=0$

(v) $(21x+8y-7)=0$

9. Which of the following equations satisfy the given points $((-2),0),((-1),(-1)),(0,(-2)),(1,(-3)),(2,(-4))$?

(i) $x=(-3)$ (ii) $y=0$ (iii) $(5x+6y-3)=0$ (iv) $y=(-x-3)$ (v) $(-7x-7y-14)=0$

10. Find the equation of a straight line parallel to x-axis and passing through the point $((-9),8)$

(i) $x=(-6)$ (ii) $y=7$ (iii) $x=(-9)$ (iv) $y=10$ (v) $y=8$

11. Any line parallel to y-axis is

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

12. The slope of y-axis is

(i) undefined (ii) 90 (iii) 0 (iv) 1 (v) -1

13. Find the value of k such that the points $((-9),0)$, $((-\frac{37}{5}), \frac{18}{5})$ and (k,9) are collinear

(i) -6 (ii) -4 (iii) -3 (iv) -5 (v) -7

14. The equation of the line passing through the points (x_1, y_1) and (x_2, y_2) is

a) $(y - y_1) = \frac{y_2 + y_1}{x_2 + x_1}(x - x_1)$

b) $(x - x_1) = \frac{x_2 - x_1}{y_2 - y_1}(y - y_1)$

c) $(x - x_1) = \frac{x_2 + x_1}{y_2 + y_1}(y - y_1)$

d) $(y - y_1) = \frac{y_2 - y_1}{x_2 - x_1}(x - x_1)$

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

15. Find equation of the right bisector of the line segment joining the points $(3,1)$ and $((-6),(-1))$

(i) $(9x+2y+56)=0$ (ii) $(9x+2y-29)=0$ (iii) $(-2x+9y)=0$ (iv) $(18x+4y+27)=0$ (v) $(9x+2y)=0$

16. The equation of the line passing through $(1,(-8))$ and parallel to the join of points $(4,3)$ and $(0,7)$ is

(i) $(-2x-4y+20)=0$ (ii) $(-11x+3y+35)=0$ (iii) $(4x+4y+28)=0$ (iv) $(-15x-y+7)=0$

(v) $(9x-7y-65)=0$

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

(i) $(-7x-8y)=0$ (ii) $(7x+8y)=0$ (iii) $(x+11y+16)=0$ (iv) $(-x+5y)=0$ (v) $(6x-3y)=0$

18. The equation of the line passing through $(4,7)$ and having the same y-intercept as $(-7x+16y+40)=0$ is

(i) $(13x-12y+32)=0$ (ii) $(-\frac{19}{2}x+7y+10)=0$ (iii) $(13x-14y+32)=0$ (iv) $(-19x+4y+10)=0$

(v) $(-\frac{19}{2}x+4y+10)=0$

19. Find the y-intercept of the line passing through points $(3,(-8))$ and $((-1),(-3))$

(i) $(\frac{-15}{4})$ (ii) $(\frac{-9}{2})$ (iii) $(-3\frac{2}{5})$ (iv) $(-4\frac{1}{4})$ (v) $(\frac{-19}{4})$

20. Which of the following pairs of lines are parallel?

(i) $(2x+10y-56)=0, (-5x+y+13)=0$ (ii) $(2x+10y-56)=0, (-4x+5y-36)=0$

(iii) $(2x+10y-56)=0, (x+5y-41)=0$ (iv) $(2x+10y-56)=0, (-6x+y+16)=0$

21. The equation of y-axis is

(i) $y=1$ (ii) $y=0$ (iii) $x=1$ (iv) $x=0$ (v) $y=x$

22. Find the point of intersection of y-axis and the line joining points $(3,5)$ and $((-1),(-7))$

(i) $(0,4)$ (ii) $(0,(-4))$ (iii) $((-\frac{4}{3}),0)$ (iv) $(0,\frac{4}{3})$

23. The slope of any line parallel to y-axis is

(i) 90 (ii) 1 (iii) undefined (iv) zero (v) -1

24. Find the point of intersection of $(11y-55)=0$ and the line joining points $(6,7)$ and $((-5),(-8))$

(i) $(\frac{53}{15},6)$ (ii) $(\frac{38}{15},3)$ (iii) $(\frac{83}{15},4)$ (iv) $(\frac{68}{15},5)$ (v) $(\frac{98}{15},7)$

25. The equation of the line parallel to $(5x-5y-15)=0$ and making a y-intercept of (-4) is

(i) $(-5x+5y+20)=0$ (ii) $(-x)=0$ (iii) $(-6x+5y+20)=0$

Assignment Key

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