EduSahara™ Assignment

Name : Line and Slope Concepts

Chapter : Equation of a Straight Line

Grade : ICSE Grade X



1. The slope of x-axis is

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

2. The slope of y-axis is

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

3. The slope of the line joining the points $(5,(-4))$ and $((-1),0)$ is

   (i) $(\frac{-4}{3})$ (ii) $(\frac{-2}{5})$ (iii) -2 (iv) 0 (v) $(\frac{-2}{3})$

4. The slope of the line perpendicular to the line passing through the points $(0,1)$ and $(6,0)$ is

   (i) 5 (ii) 4 (iii) 7 (iv) 8 (v) 6

5. Two straight lines are parallel if and only if their slopes are

   (i) 1 (ii) equal (iii) undefined (iv) 0 (v) unequal

6. Two straight lines are perpendicular if and only if the product of their slopes is

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

7. The slope of a line parallel to the line $(-12x-8y-32)=0$ is

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

8. The slope of a line perpendicular to the line $(-8x+11y+32)=0$ is

   (i) $(\frac{-9}{8})$ (ii) $(\frac{-13}{8})$ (iii) $(\frac{-13}{10})$ (iv) $(\frac{-3}{2})$ (v) $(\frac{-11}{8})$

9. The equation of x-axis is

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

10. The equation of y-axis is

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

11. The slope of any line parallel to x-axis is

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

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

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

13. The ratio of coefficients of x and y in the equations of any two parallel lines is

    (i) same (ii) 1 (iii) not proportional (iv) not same (v) 2

14. Two non-vertical lines are parallel if and only if their slopes are

(i) 2 (ii) 1 (iii) not proportional (iv) not same (v) same

15. Any line parallel to x-axis is

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

16. Any line parallel to y-axis is

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

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

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

18. Which of the following are true?

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

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

19. Which of the following are true ?

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

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

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

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

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

21. Equation of a straight line which is parallel to x-axis (where k is a constant) is

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

22. Equation of a straight line which is parallel to y-axis (where k is a constant) is

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

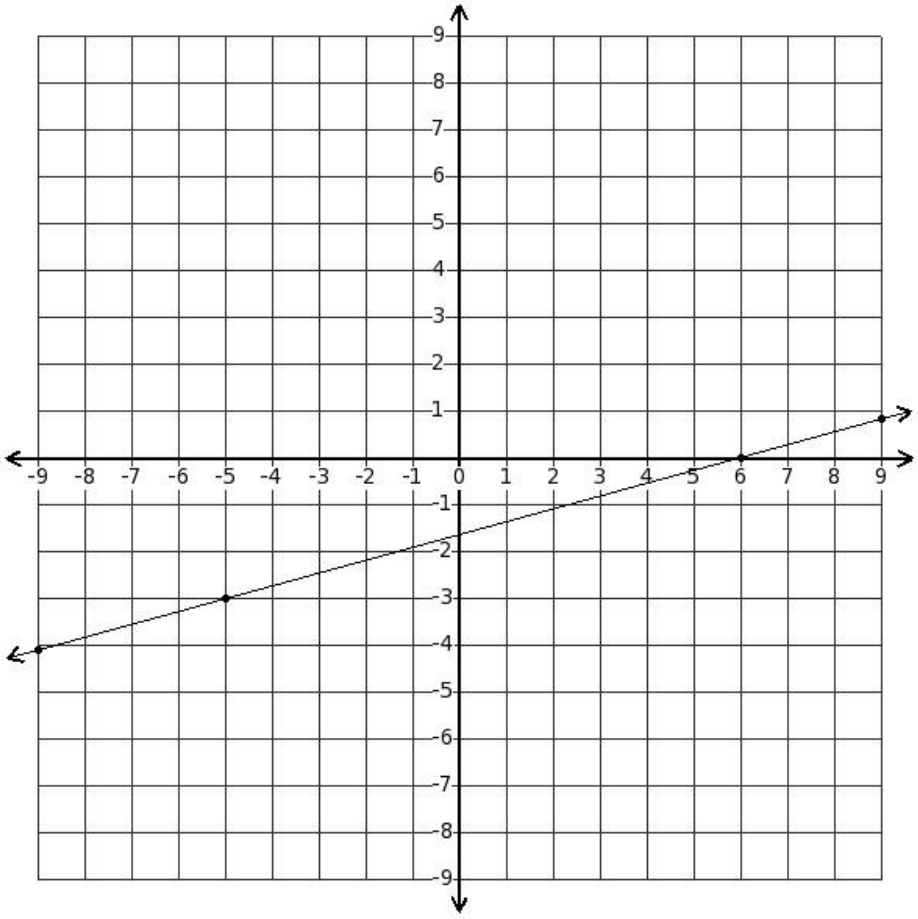
23. The slope of the line $ax + by + c = 0$ is

(i) c (ii) b (iii) $\frac{-a}{b}$ (iv) $\frac{-b}{a}$ (v) a

24. In equation of the line $y = mx + c$, the slope is

(i) m (ii) y (iii) c (iv) x (v) undefined

25. Find the slope of the displayed line



(i) $\frac{3}{13}$ (ii) $\frac{1}{3}$ (iii) $\frac{5}{11}$ (iv) $\frac{3}{11}$ (v) $\frac{1}{11}$

26. The equation of the line in slope intercept form is

a) $x = cy + m$
b) $y = cx + m$
c) $y = mx + c$
d) $x = my + c$

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

27. The equation of the line in point slope form is

a) $(y_1 - y)m = (x_1 + x)$
b) $(y - y_1)m = (x - x_1)$
c) $(y - y_1) = m(x - x_1)$
d) $(y - x_1) = m(x - y_1)$

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

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

29. The equation of the x-axis is

a) $y = 0$

b) $x = 1$

c) $x = y$

d) $x = 0$

e) $y = 1$

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

30. The slope of the line passing through the points $(x_1, y_1)$ and $(x_2, y_2)$

(i) $\frac{x_2 - x_1}{y_2 - y_1}$ (ii) $\frac{y_2 - y_1}{x_2 - x_1}$ (iii) $\frac{x_2 + x_1}{y_2 + y_1}$ (iv) $\frac{x_2 + y_1}{y_2 + x_1}$ (v) $\frac{x_2 - y_1}{y_2 - x_1}$

31. The slope of a line is the tangent of the angle made by the line with the

(i) negative x-axis (ii) negative y-axis (iii) positive y-axis (iv) positive x-axis

## Assignment Key

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|---|---|---|---|---|---|
| 1) (iv) | 2) (ii) | 3) (v) | 4) (v) | 5) (ii) | 6) (ii) |
| 7) (v) | 8) (v) | 9) (v) | 10) (iv) | 11) (ii) | 12) (iv) |
| 13) (i) | 14) (v) | 15) (ii) | 16) (iv) | 17) (ii) | 18) (v) |
| 19) (iii) | 20) (i) | 21) (iii) | 22) (iv) | 23) (iii) | 24) (i) |
| 25) (iv) | 26) (i) | 27) (ii) | 28) (iii) | 29) (iii) | 30) (ii) |
| 31) (iv) | | | | | |