EduSahara™ Learning Center Assignment

Grade : Class X, ICSE
Chapter : Equation of a Straight Line
Name : Line and Slope Concepts

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1. The slope of x-axis is

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

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2. The slope of y-axis is

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

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3. The slope of the line joining the points $(5,(-7))$ and $((-7),6)$ is

(i) $(\frac{-15}{14})$ (ii) $(\frac{-5}{4})$ (iii) $(\frac{-11}{10})$ (iv) $(\frac{-11}{12})$ (v) $(\frac{-13}{12})$

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4. The slope of the line perpendicular to the line passing through the points $((-1),0)$ and $(8,(-6))$ is

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

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

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

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

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

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7. The slope of a line parallel to the line $(6x - y + 6) = 0$ is

(i) 9 (ii) 7 (iii) 3 (iv) 5 (v) 6

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8. The slope of a line perpendicular to the line $(6x - y + 50) = 0$ is

(i) $\frac{1}{6}$ (ii) $(\frac{-1}{6})$ (iii) $(\frac{-1}{2})$ (iv) $(\frac{-1}{4})$ (v) $(\frac{-1}{8})$

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9. The equation of x-axis is

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

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10. The equation of y-axis is

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

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

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

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

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

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

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

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

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

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15. Any line parallel to x-axis is

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

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16. Any line parallel to y-axis is

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

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

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

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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 not defined
d) Slope of any line parallel to x-axis is zero

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

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19. Which of the following are true ?

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

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

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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) $(y - y_1) = m\,(x - x_1)$

c) None of the above

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

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

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

(i) $y = k$
(ii) $x = y$

(iii) $x = k$

(iv) $x = 0$

(v) $y = 0$

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

(i) $y = k$

(ii) $y = 0$

(iii) $x = 0$

(iv) $x = y$

(v) $x = k$

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

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

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

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

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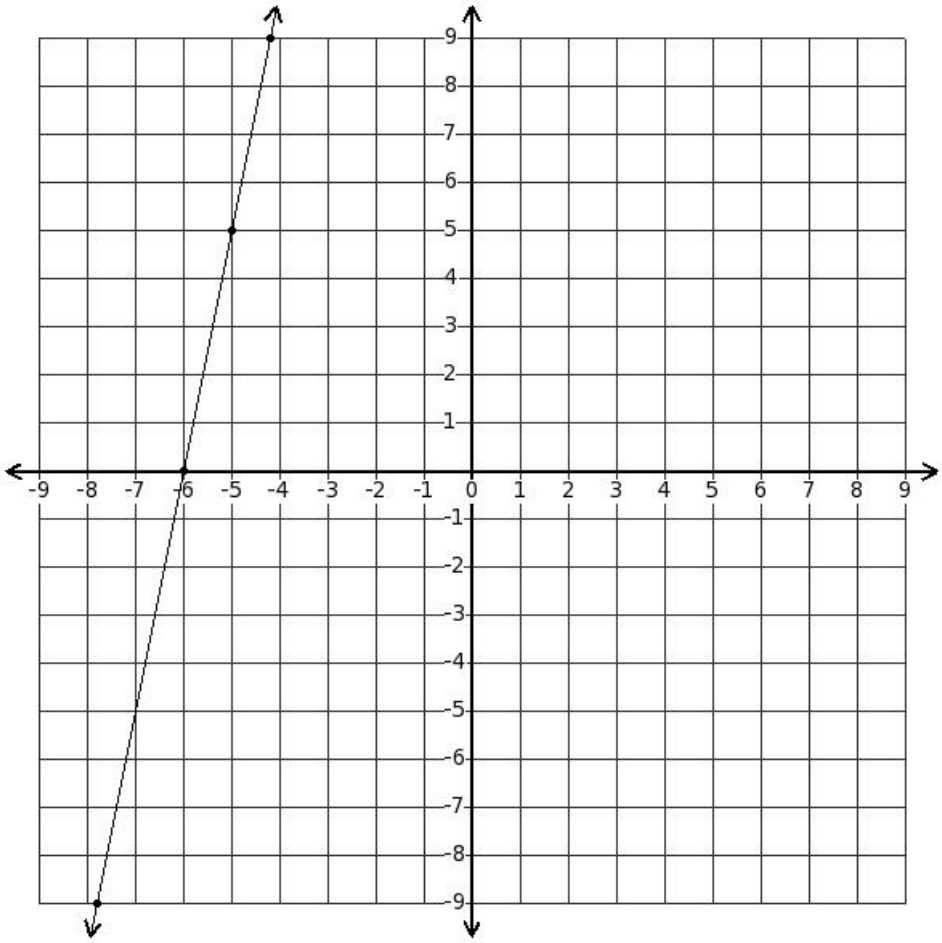
25. Find the slope of the displayed line



(i) 4 (ii) 5 (iii) 2 (iv) 8 (v) 6

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

a) $x = cy + m$

b) $x = my + c$

c) $y = mx + c$

d) $y = cx + m$

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

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

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

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

c) $(y - y_1)\, m = (x - x_1)$

d) $(y_1 - y)\, m = (x_1 + x)$

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

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

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

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

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

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29. The equation of the x-axis is

a) $x = y$

b) $x = 0$

c) $x = 1$

d) $y = 1$

e) $y = 0$

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

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

(i) $\frac{y_2 - y_1}{x_2 - x_1}$ (ii) $\frac{x_2 - x_1}{y_2 - y_1}$ (iii) $\frac{x_2 + y_1}{y_2 + x_1}$ (iv) $\frac{x_2 + x_1}{y_2 + y_1}$ (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 y-axis (ii) positive y-axis (iii) positive x-axis (iv) negative x-axis

Assignment Key

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