S.3 WORK-11

Find the y and x – intercepts on the axes made by the straight lines:

1. $y = 2x + 7$
2. $y = 3x + \frac{1}{2}$
3. $x + 2y = 8$
4. $2x + y = 10$
5. $3x - 4y = 3$
6. $5x + 3y = 1$
7. $2y + 2x = 8$
8. $4x - 3y = 12$
9. $3x - y - 7 = 0$
10. $2x - 2y = 3$
11. $y = 1.2x + 2.4$
12. $y = 4x$
13. $y = 2 - 4x$
14. $y = -1 - x$
15. $\frac{1}{2}y = 3x + 4$
16. $y + x = 0$
17. $2y + 4x - 8 = 0$
18. $y - x = \frac{1}{5}$
19. $2y + x + \frac{3}{4} = 0$
20. $y \frac{2}{3}x - 4 = 0$

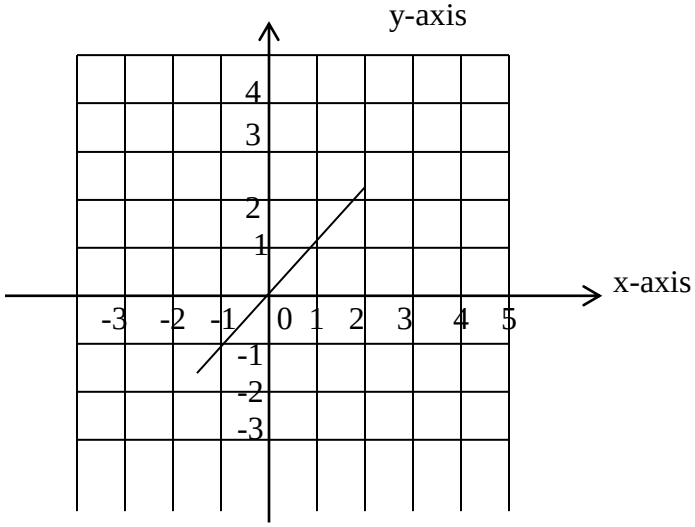
21. State the gradient of the following:
    a) $3y = 2x + 5$ (b) $y = 4$ (c) $y = 1.5x + 6$
22. a) $4y + 3x + 4 = 0$ (b) $6y = -3 - 5$ (c) $-3y = 6x - 10$
23. (a) $\frac{2}{3}y = x + 1$ (b) $3/7x + 9$ (c) $y = -10$

Find the gradient of lines that pass through the following pairs of points;

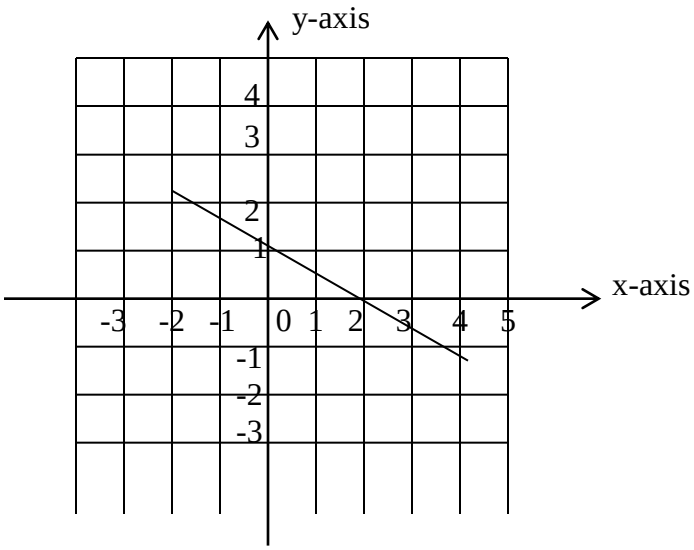
24. a) (3, -7) and (0, 0) (b) (-3, -2) and (5, 7) (c) (1½, -1) and (-½, ¾)
25. a) (0, -4) and (-3, -4) (b) (-1, -5) and (-2, -1) (c) (1, -2) and (-1, 1⅓)
26. a) (1, 1) and (3, 5) (b) (3, -4) and (-8, 8) (c) (1, -3) and (-3, -5)

Find the gradients of the line segments in the graphs below

27 (a)

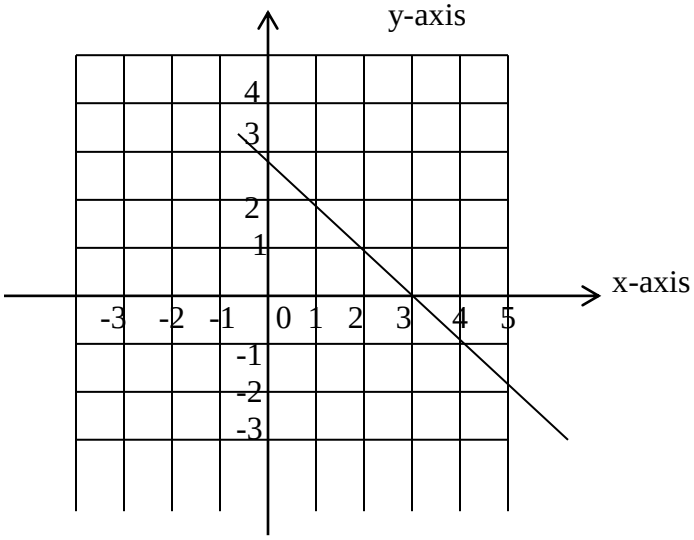


(b)

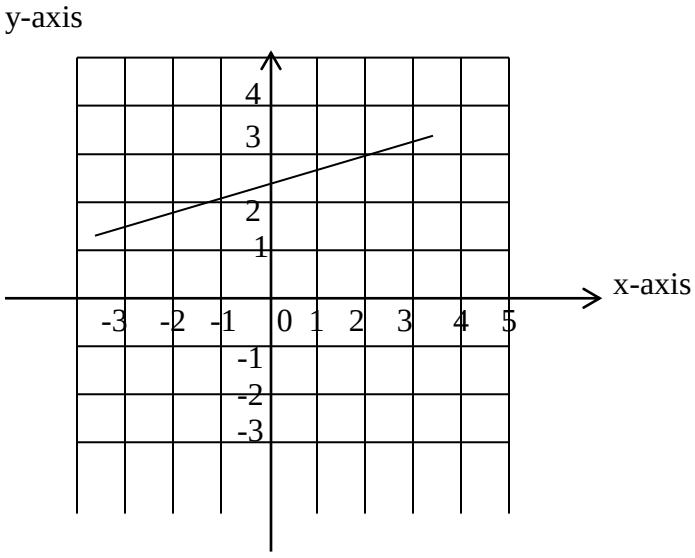

y-axis
x-axis
4
3
2
1
-3 -2 -1 0 1 2 3 4 5
-1
-2
-3

28.

(a)


y-axis
x-axis
4
3
2
1
-3 -2 -1 0 1 2 3 4 5
-1
-2
-3

(b)



Find the gradients lines which are parallel to the lines whose equations are given below

29. a) $5x + 3y = 1$ (b) $2y + 2x - 4 = 0$ (c) $2x - 2y = 3$

30 a) $3x - y - 7 = 0$ (b) $2y + x + \frac{3}{4} = 0$ (c) $\frac{1}{2}y = 3x + 4$

31. a) $2x - 4y = 0$ (b) $x + 2y = 5$ (c) $y = 4$

Find the gradient of lines which are perpendicular to the lines whose equations are given below.

32. a) $6x + 3y - 1 = 0$ (b) $2y + 2x = 4$ (c) $2x - 2y + 3 = 0$

33. a) $3x - y = 7$ (b) $2y + x = -\frac{3}{4}$ (c) $\frac{1}{2}y - 3x + 4 = 0$

34. a) $2x - 4y + 6 = 0$ (b) $x + 2y - 5 = 0$ (c) $y + 4x = 0$

Find the equations of lines with gradients and y-intercepts given below;

35. a) $\frac{3}{4}$ and y-intercept 8 (b) 3 and y-intercept 2 (c) -5 and y-intercept $\frac{1}{2}$

36. a) $\frac{1}{2}$ and y-intercept 0.2 (b) 1 and y-intercept 3 (c) -2.5 and y-intercept $\frac{1}{3}$

37. a) 5/2 and y-intercept 10 (b) 6 and y-intercept 5/6 (c) 7 and y-intercept 3

Find the equations of the straight lines given the gradients and the point through which the lines pass.

38. a) -½, (5, 2) (b) 5, (-1, -6) (c) ¾, (1⅓, 5/6)

39. a) ⅔, (-3, 2) (b) -¾, (4, 5) (c) 2, (0, 5)

Find the equation of the line which passes through the given point and is parallel to the line whose equation is given

40. a) (3, 4), 3y + 5x = 1 (b) (2, 1), 2y + 2x – 4 = 0 (c) (3, 0), 2x – 2y = 3

41. a) (o, 4), x + 2y = 5 (b) (-½, 3), 2y + x = -¾ (c) (7, 2), 2x – 4y = 6

42. a) (2, 3), 3y = 4x + 7 (b) (6, 5), 2y + 3x = 5 (c) (3, -5), 5y – 3x = 7

Find the equation of the line which passes through the given point and is perpendicular to the line whose equation is given

43. a) (3, 4), 3y + 5x = 1 (b) (2, 1), 2y + 2x - 4 = 0 (c) (3, 0), 2x – 2y = 3

44. a) (0, 4), x + 2y = 5 (b) (-½, 3), 2y + x = -¾ (c) (7, 2), 2x – 4y = 6

45. a) (2, 3), 3y = 4x + 7 (b) (6, 5), 2y + 3x = 5 (c) (3, -5), 5y – 3x = 7