Section 5.6 – Some Special Cases

Problem Set 2

Determine if the following lines are vertical, horizontal or neither.

1. $4 + 2x = 3$
2. $-3y = 9$
3. $2y = 3x - 4$
4. $3x + 4 = 7$
5. $y + \frac{4}{3} = 0$
6. $y = 4$
7. $x + y = 3$
8. $-17 = x$
9. $3x + 2y = 3x + 1$

Find the equations of the lines through the following pairs of points.

10. (4, 3) and (4, 2)
11. (0.3, -1) and (0.3, -.5)
12. $\left(\frac{1}{8}, -2\right)$ and $\left(\frac{1}{8}, \frac{4}{5}\right)$
13. (2, 4) and (2, 0)
14. (3, 1.4) and (-4, 4)
15. (3, -1) and (4, -1)

Classify the following pairs of lines as parallel, perpendicular or neither.

16. $y = 2x + 4$ and $y = 2x - 5$
17. $-3x + 2y = 4$ and $y = 2$
18. $y = 3x - 4$ and $y = 2x + 7$
19. $x = 0$ and $y = -2$
20. $4y - x = 1$ and $y = -4x - 3$
21. $y - 3x = 6$ and $y = 3x - 3$
22. $y = -3x + 2$ and $-3y + x = 9$
23. $-3x + 2y = 1$ and $9x - 3y = 7$
24. $5x + 5y = 1$ and $3x + 7y = 1$
25. $x + y = 0$ and $x - 2y = 2$
26. $2x + 2y = -3$ and $2x - 5y = 7$
27. $y = 3x - 4$ and $y = -\frac{4}{3}x - 3$

Find the line parallel to the given line that passes through the given point.

28. $y = -3x + 4$ and (3, 6)
29. $3y + 3x = 4$ and (-1, 1)
30. $y = 2.1x - 1$ and (3.2, 0)
31. $y = 5$ and (-3, 2)
32. $4y + 2x = 1$ and (1, 4)
33. $5y + 6x = 3$ and (2, -1)

Find the line perpendicular to the given line that passes through the given point.

34. $y = -2x + 3$ and (2, 1)
35 $y = -1.1x - 3.8$ and (1.3, 1.3)
36. $3y + 2x = 3$ and (0, 1)
37. $-3y + x = 7$ and (1, 4)
38. $3y - 2x = 0$ and (1, 0)
39. $x = 3$ and (1, 3)