

4.3**Practice A**

In Exercises 1 and 2, determine which of the lines, if any, are parallel. Explain.

1. Line a passes through $(-1, 1)$ and $(1, 3)$.
Line b passes through $(3, 4)$ and $(0, 2)$.
Line c passes through $(0, 1)$ and $(3, 3)$.

2. Line a : $2y = x + 12$
Line b : $2y - x = 5$
Line c : $2y + x = 4$

In Exercises 3 and 4, write an equation of the line that passes through the given point and is parallel to the given line.

3. $(1, 3)$; $y = 2x - 5$

4. $(-2, 1)$; $y = -4x + 3$

In Exercises 5 and 6, determine which of the lines, if any, are parallel or perpendicular. Explain.

5. Line a passes through $(-2, 3)$ and $(1, -1)$.
Line b passes through $(-3, 1)$ and $(1, 4)$.
Line c passes through $(0, 2)$ and $(3, -2)$.

6. Line a : $y = -4x + 7$
Line b : $x = 4y + 2$
Line c : $-4y + x = 3$

In Exercises 7 – 10, write an equation of the line that passes through the given point and is perpendicular to the given line.

7. $(2, -3); y = \frac{1}{3}x - 5$

8. $(6, 1); y = -\frac{3}{5}x - 5$

9. $(-3, 1); y = -5x + 2$

10. $(8, -5); y = 2x + 3$

In Exercises 11 and 12, write an equation of the line that passes through the given point and is (a) parallel and (b) perpendicular to the given line.

