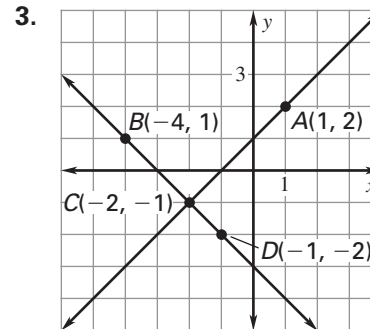
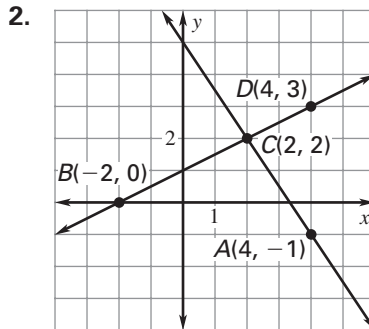
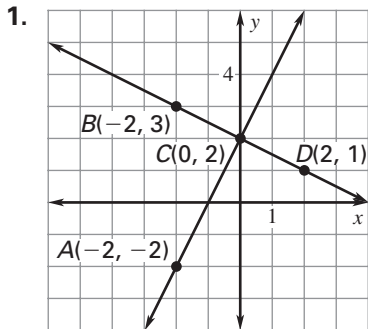


Practice A

For use with pages 172–178

Find the slope of \overleftrightarrow{AC} and \overleftrightarrow{BD} . Decide whether \overleftrightarrow{AC} is perpendicular to \overleftrightarrow{BD} .



The slopes of two lines are given. Are the lines perpendicular?

4. $m_1 = 2, m_2 = \frac{1}{2}$

5. $m_1 = -\frac{1}{2}, m_2 = 2$

6. $m_1 = 4, m_2 = -\frac{1}{4}$

7. $m_1 = -\frac{2}{3}, m_2 = \frac{3}{2}$

8. $m_1 = \frac{3}{4}, m_2 = \frac{4}{3}$

9. $m_1 = -1, m_2 = 1$

Lines a and b are perpendicular. The slope of line a is given. What is the slope of line b ?

10. 3

11. $\frac{3}{4}$

12. -2

13. $-\frac{5}{2}$

14. $-\frac{1}{2}$

15. $\frac{2}{5}$

16. 1

17. $-\frac{6}{7}$

Decide whether lines p_1 and p_2 are perpendicular.

18. line $p_1: y = 3x + 5$

19. line $p_1: 3x + 5y = 12$

line $p_2: y = \frac{1}{3}x + 5$

line $p_2: 5x + 3y = 18$

20. line $p_1: 4x - 2y = 6$

21. line $p_1: x + 8y = -4$

line $p_2: 2x + 4y = 6$

line $p_2: 4x - 2y = 10$

Line j is perpendicular to the line with the given equation and line j passes through P . Write an equation of line j .

22. $y = \frac{1}{3}x + 4, P(0, 5)$

23. $y = 3x + 4, P(0, -2)$

24. $y = -\frac{4}{5}x + 4, P(1, 1)$

25. $y = \frac{2}{3}x + 4, P(2, 0)$

Write an equation parallel to the given line. Write an equation perpendicular to the given line.

26. $y = 2x - 4$

27. $y = -x + 5$

28. $y = \frac{1}{3}x - 2$