

Practice 9-2

Example Exercises

Example 1

1. You live three blocks west and four blocks north of the library. Your friend lives two blocks east and eight blocks north of the library. How many blocks apart do you and your friend live?
2. You work for a delivery service. Your first delivery is 4 mi west and 6 mi north of the office. Your second delivery is 3 mi east and 7 mi south of the office. How far apart are the two deliveries?
3. Two small planes take off from the same airport. Each plane flies to a different airport. The first plane flies to an airport that is 50 mi east and 75 mi north of the original airport. The second plane flies to an airport that is 60 mi west and 40 mi south of the original airport. How far apart are the two planes when they land at the airports?
4. Forest rangers use lookout towers to locate forest fires. One tower is 5 km west and 3 km north of a fire. A second tower is 3 km west and 4 km south of the fire. How far apart are the two towers?

Example 2

Find the distance between each pair of points. Round your answer to the nearest tenth.

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|------------------------|-------------------------|------------------------|-----------------------|
| 5. (0, 6), (8, 0) | 6. (1, 2), (4, 6) | 7. (-3, 1), (2, 13) | 8. (3, -2), (5, -4) |
| 9. (8, 7), (3, 10) | 10. (-2, -1), (4, -3) | 11. (2, -7), (-3, -1) | 12. (5, 1), (2, 9) |
| 13. (3, -4), (8, 6) | 14. (6, -2), (-8, 12) | 15. (7, 5), (3, -1) | 16. (9, 15), (-6, -2) |
| 17. (-6, 12), (13, 21) | 18. (8, -10), (14, -22) | 19. (4, -9), (10, -15) | 20. (23, 8), (3, -19) |

Example 3

Find the midpoint of \overline{XY} .

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| 21. $X(2, 4)$ and $Y(6, 10)$ | 22. $X(3, 5)$ and $Y(9, 17)$ | 23. $X(-3, 2)$ and $Y(5, -4)$ |
| 24. $X(-1, -8)$ and $Y(6, -4)$ | 25. $X(-1, -5)$ and $Y(-3, 9)$ | 26. $X(1, 7)$ and $Y(6, 9)$ |
| 27. $X(-4, 1)$ and $Y(6, 4)$ | 28. $X(9, -2)$ and $Y(8, 3)$ | 29. $X(6, -11)$ and $Y(0, -7)$ |
| 30. $X(6\frac{1}{2}, 8)$ and $Y(3\frac{1}{2}, 2)$ | 31. $X(7, -7)$ and $Y(4, -11)$ | 32. $X(3, -2)$ and $Y(7, -15)$ |
| 33. $X(-3, -2)$ and $Y(-6, -17)$ | 34. $X(-1, -11)$ and $Y(8, 16)$ | 35. $X(8, 13)$ and $Y(2, -5)$ |