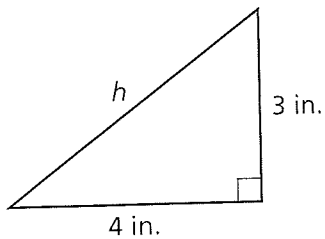
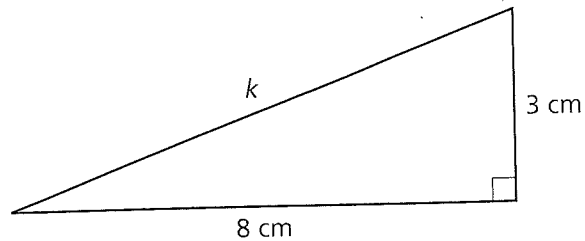


In Exercises 5 and 6, find each missing length.

5.

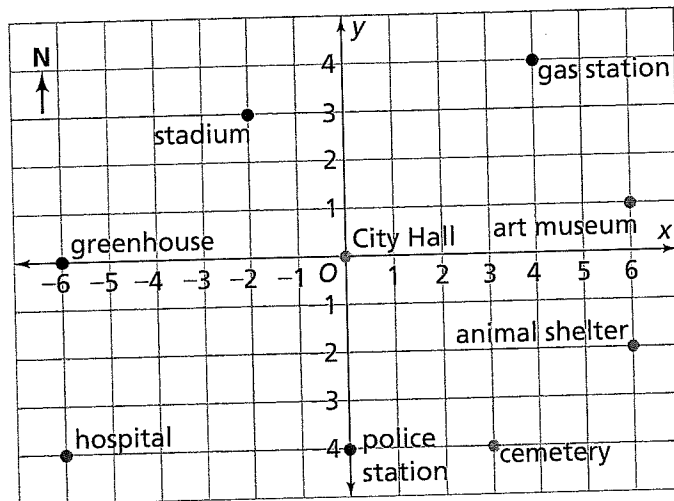


6.



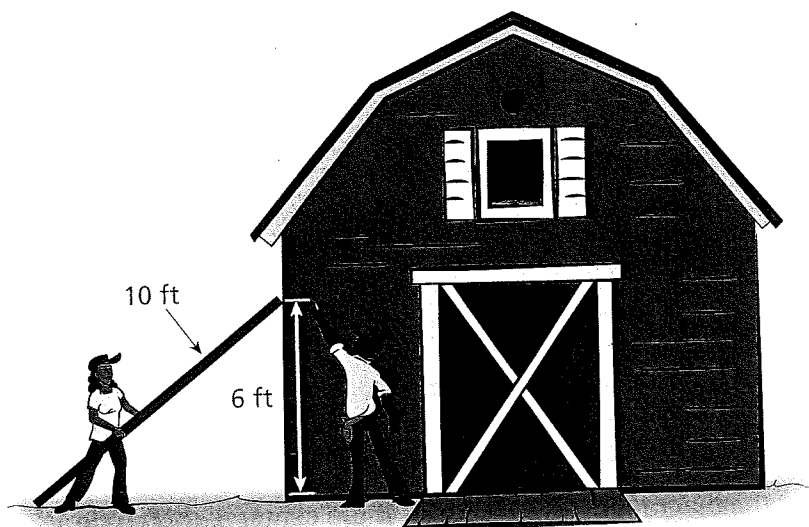
7. On dot paper, find two points that are  $\sqrt{17}$  units apart. Label the points  $W$  and  $X$ . Explain how you know the distance between the points is  $\sqrt{17}$  units.
8. On dot paper, find two points that are  $\sqrt{20}$  units apart. Label the points  $Y$  and  $Z$ . Explain how you know the distance between the points is  $\sqrt{20}$  units.

For Exercises 9–12, use the map of Euclid. Find the flying distance in blocks between each pair of landmarks without using a ruler. Explain.



9. greenhouse and stadium
10. police station and art museum
11. greenhouse and hospital
12. City Hall and gas station

22. Nayo draws a quadrilateral. It has adjacent sides measuring 16 inches and 20 inches and a diagonal measuring 25 inches. Is her quadrilateral a rectangle? Explain.
23. Bo is building a tree house. He has marked locations for four holes that will hold his corner posts. They form a figure with a long side of 12 feet and a short side of 9 feet. What must the diagonal of the figure be to make sure the base of his tree house is a rectangle?
24. One method for checking whether a wall is perpendicular to the ground involves a 10-foot pole. A builder makes a mark exactly 6 feet high on the wall, and rests one end of the pole at that mark. The other end of the pole rests on the ground. A triangle is formed.



If the triangle is a right triangle, how far from the base of the wall is the bottom of the pole? Explain.

25. In the city of Euclid, Hilary's house is located at  $(5, -3)$ , and Jamilla's house is located at  $(2, -4)$ .
- Without plotting points, find the shortest driving distance in blocks between the two houses.
  - What is the exact flying distance between the two houses?

For Exercises 33–38, tell whether it is possible to draw a segment of the given length by connecting dots on dot paper. Explain.

33.  $\sqrt{2}$  units

34.  $\sqrt{3}$  units

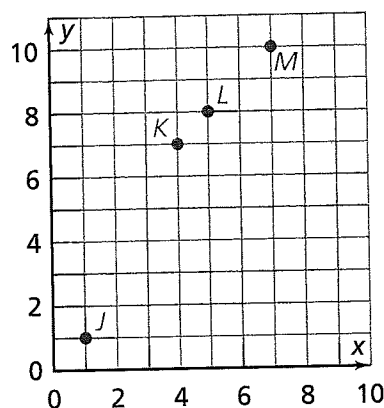
35.  $\sqrt{4}$  units

36.  $\sqrt{5}$  units

37.  $\sqrt{6}$  units

38.  $\sqrt{7}$  units

39. Use the graph to answer parts (a)–(c).



- Find the coordinates of points  $J$  and  $K$ .
- Use the coordinates to find the distance from point  $J$  to point  $K$ . Explain your method.
- Use your method from part (b) to find the distance from point  $L$  to point  $M$ .