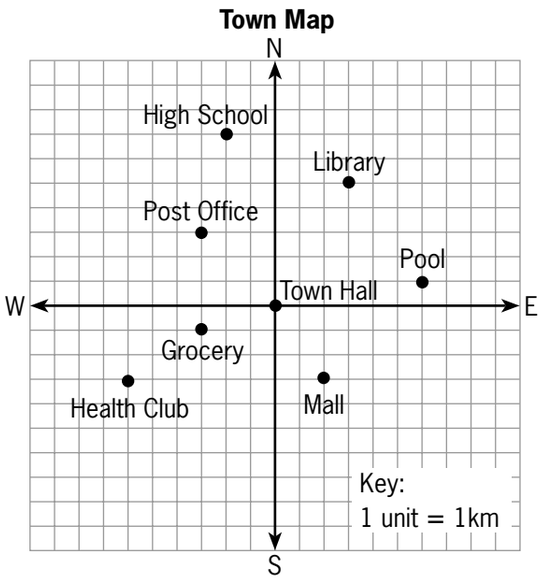
NAME _____ DATE _____

Module 18 Solving Radical Equations
Lesson 4 Solving Problems Using the Distance and Midpoint Formulas

additional practice

For Problems 1–12, use the map below.



1. What is the distance from the library to the mall?

_____

2. What is the distance from the pool to the grocery?

_____

3. What is the distance from the post office to the health club?

_____

4. What is the distance from the high school to the pool?

_____

5. What is the distance from the mall to the health club?

_____

6. What is the distance from the pool to town hall?

_____

7. The town is going to open up another high school located two kilometers east and four kilometers south of town hall. Relative to town hall, what is the midpoint between these two locations?

_____

8. A bookstore is located six kilometers west and three kilometers north of town hall. What is the distance from the bookstore to the library?

_____

9. A sporting goods store would like to open a location at a point between the health club and the pool, equidistant from the two locations. Relative to town hall, where is the ideal location for the sporting goods store?

_____

_____

10. A librarian and the postmaster leave their places of work and walk in a straight line toward each other, meeting at a point halfway between the library and the post office. They then walk directly to town hall to pick up their paychecks. How far do the librarian and postmaster walk together?

_____

11. Jefferson Elementary School is located halfway between the grocery and the post office. Washington Elementary School is located halfway between the health club and the pool. What is the distance between the two elementary schools?

_____

12. A public service radio station is broadcast in all directions from town hall. The signal reaches only as far as the high school. What is the area in which the station can be heard? (Hint: $A = \pi r^2$)

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