

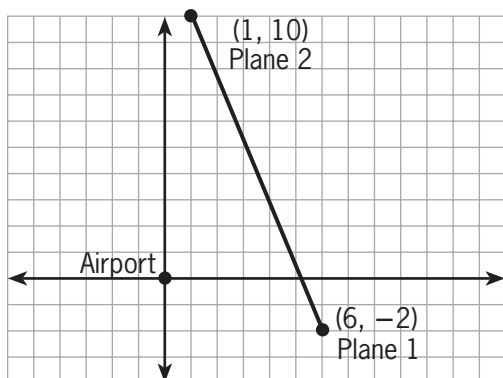
**guided practice**

NAME \_\_\_\_\_

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

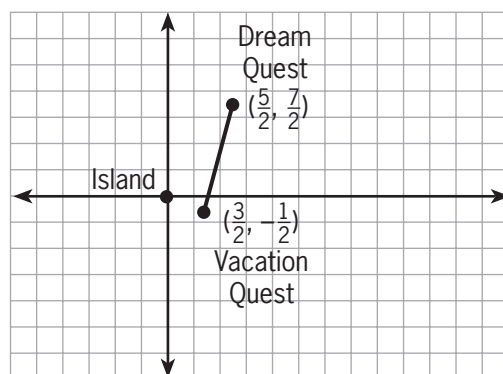
**Set 1**

1. Find the distance between Plane 1, located six miles east and two miles south of an airport, and Plane 2, located one mile east and 10 miles north of the same airport.



**13 miles**

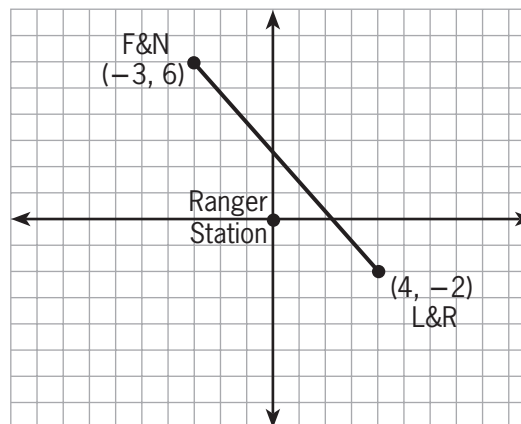
2. Find the distance between the ship Vacation Quest, located  $\frac{3}{2}$  miles east and  $\frac{1}{2}$  mile south of an island, and the ship Dream Quest, located  $\frac{5}{2}$  miles east and  $\frac{7}{2}$  miles north of the same island.



**$\sqrt{17}$  miles or about 4.1 miles**

© 2003 BestQuest

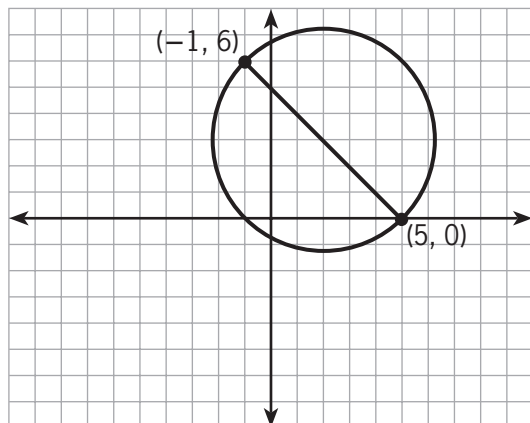
3. At a state park, Ferd and Newt's campsite is located three miles west and six miles north of the ranger station. Lizzie and Roxy's campsite is located four miles east and two miles south of the ranger station. Find the distance between the campsites.



**$\sqrt{113}$  miles or about 10.6 miles**

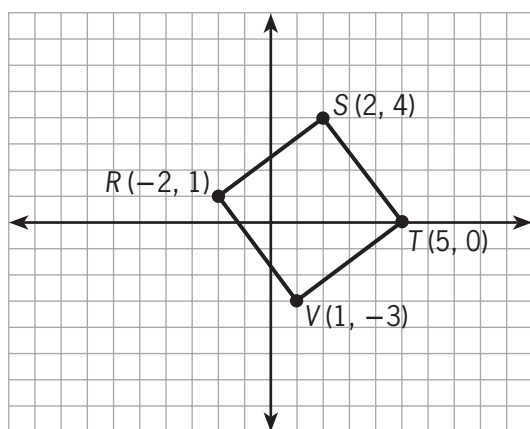
**Set 2**

- The endpoints of the diameter of a circle are  $(-1, 6)$  and  $(5, 0)$ . Find the coordinates of the center of the circle.



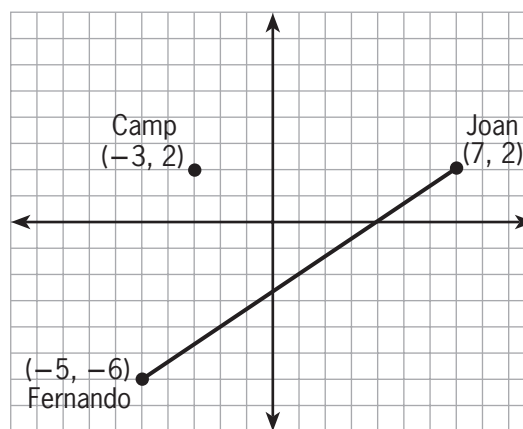
**(2, 3)**

- An archeologist maps out a square area  $RSTV$  to be excavated. In the drawing, the side of a square represents one meter. To divide the excavation into two teams, he connects the midpoints of sides  $\overline{RS}$  and  $\overline{TV}$  with rope. How long is the rope?



**five meters**

- Fernando is located five miles west and six miles south of the park entrance. Joan is located seven miles east and two miles north of the park entrance. They will walk in a straight line towards each other and meet at a point halfway between them. Then, they will hike together to a camp located three miles west and two miles north of the park entrance. How far will the hikers travel from their meeting point to the camp?



**$4\sqrt{2}$  miles or about 5.7 miles**