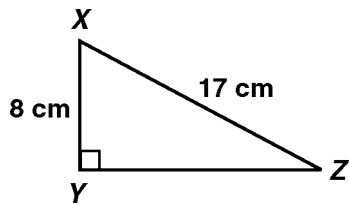# Pythagorean Theorem Practice
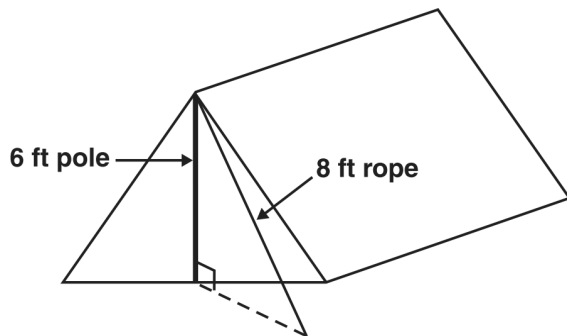
Name: _____ **Date:** _____

1. What is the length of $\overline{YZ}$?

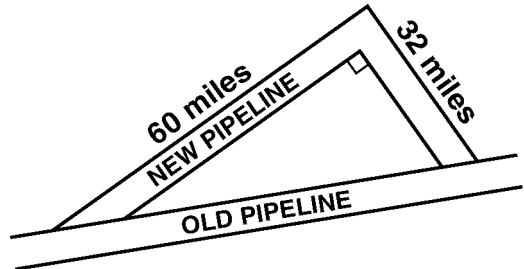   A. 9 cm   B. 15 cm   C. 19 cm   D. 25 cm

2. Sophia used an 8-foot rope to secure a 6-foot tent pole as shown.

Approximately how far from the base of the pole is the rope tied?

   A. 5 feet   B. 7 feet

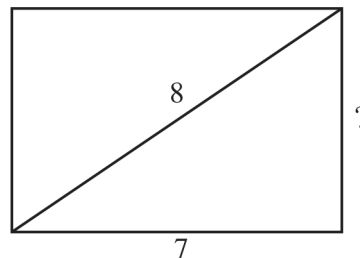   C. 10 feet   D. 14 feet

3. A new pipeline is being constructed to re-route its oil flow around the exterior of a national wildlife preserve. The plan showing the old pipeline and the new route is shown below.

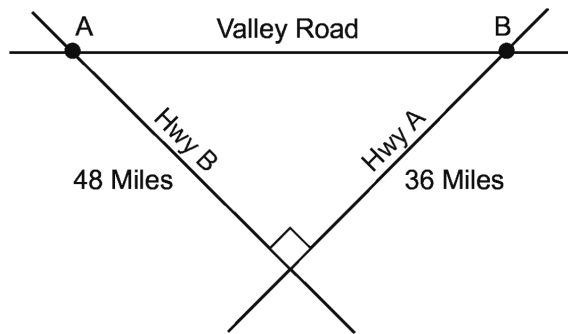About how many extra miles will the oil flow once the new route is established?

   A. 24   B. 68   C. 92   D. 160

4. What is the height of this rectangle?

   A. 1 unit   B. 6 units

   C. $\sqrt{15}$ units   D. $\sqrt{113}$ units

5. To go from Point A to Point B, Malia could travel along 2 main highways or take the direct route along Valley Road.
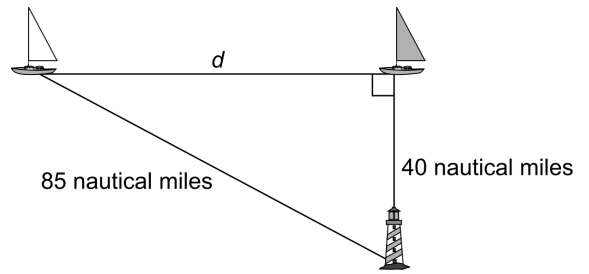

How many miles long is the route along Valley Road?

A. 12 miles   B. 24 miles

C. 36 miles   D. 60 miles

6. A rectangular piece of paper measures 10 centimeters wide by 17 centimeters long. What is the length of the paper's diagonal to the nearest centimeter?

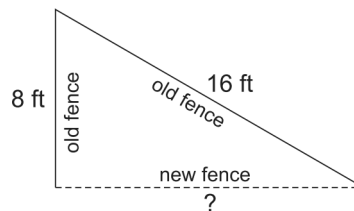A. 14 centimeters   B. 17 centimeters

C. 20 centimeters   D. 27 centimeters

7. **Use the diagram to answer the question.**

The diagram shows the relative positions of a lighthouse and two boats. What is the distance, d, between the two boats?

A. 45 nautical miles   B. 63 nautical miles
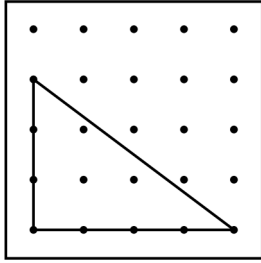
C. 75 nautical miles   D. 94 nautical miles

8. Manuel is planning a flower garden shaped like a right triangle. He will use an old 16-foot fence for the longest side and an old 8-foot fence for another side as shown.

Which is the best estimate of the amount of fencing he will need for the third side?

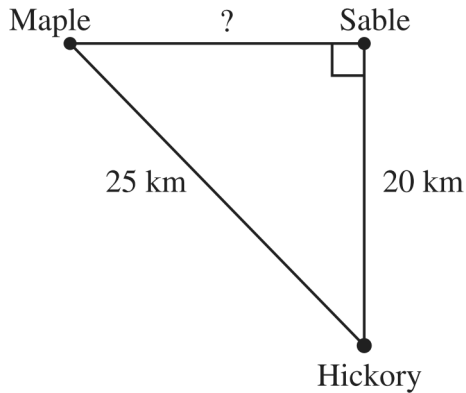A. 8 feet   B. 12 feet

C. 24 feet   D. 14 feet

9. On the grid below, the distance between each dot is 1 inch.

What is the length, in inches, of the hypotenuse of the right triangle?

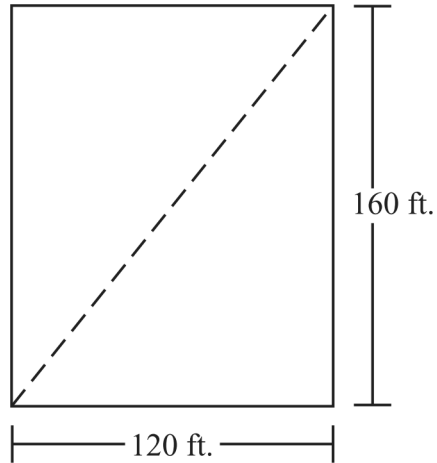A. 4   B. 4.5   C. 5   D. 5.5

10. The roads connecting the three towns on the map below form a right triangle. Two of the distances are given.

Based on the distances given on the map, what is the distance between Maple and Sable?
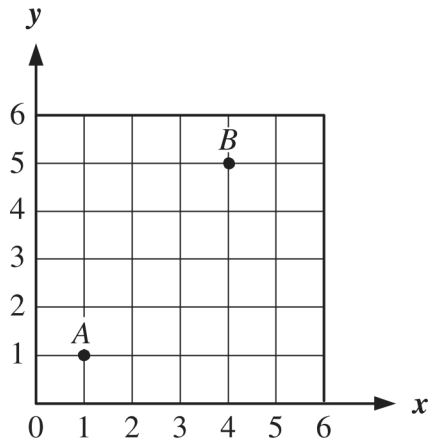
A. 12 km   B. 15 km   C. 16 km   D. 19 km

11. The diagram below shows the dimensions of a rectangular field.

What is the length of a diagonal of the field?

A. 120 ft.   B. 200 ft.   C. 394 ft.   D. 520 ft.
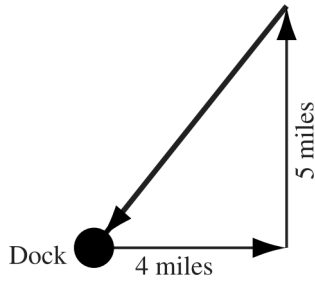
12. Use the grid below to answer the following question.

Two points, A and B, are located on the grid above. What is the distance between A and B?

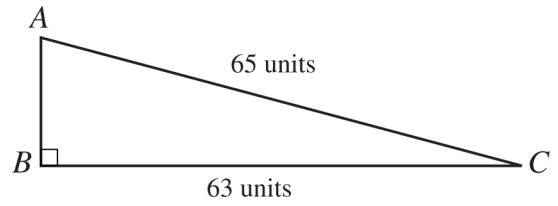A. $3\sqrt{2}$ B. $4\sqrt{2}$ C. 5   D. 6

13. A boat traveled 4 miles due east away from a dock. Then it turned and traveled 5 miles due north. Finally, it turned again and traveled back to the dock as shown in the figure below.

Which of the following is closest to the total distance the boat traveled?
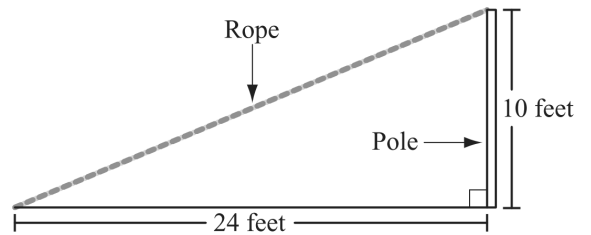
A. 12 miles   B. 13 miles

C. 15 miles   D. 18 miles

14. Triangle *ABC*, shown below, is a right triangle.

What is the length of $\overline{AB}$?

A. 2 units   B. 16 units

C. 64 units   D. 90.5 units

15. A pole has a height of 10 feet. A rope is attached to the top of the pole and is anchored to the ground 24 feet away from the pole, as shown in the diagram below.

Assuming that the rope is straight, what is the length of the rope?

A. 22 feet   B. 26 feet

C. 30 feet   D. 34 feet

     Pythagorean Theorem Practice

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1.
Answer: B

2.
Answer: A

3.
Answer: A

4.
Answer: C

5.
Answer: D

6.
Answer: C

7.
Answer: C

8.
Answer: D

9.
Answer: C

10.
Answer: B

11.
Answer: B

12.
Answer: C

13.
Answer: C

14.
Answer: B

15.
Answer: B