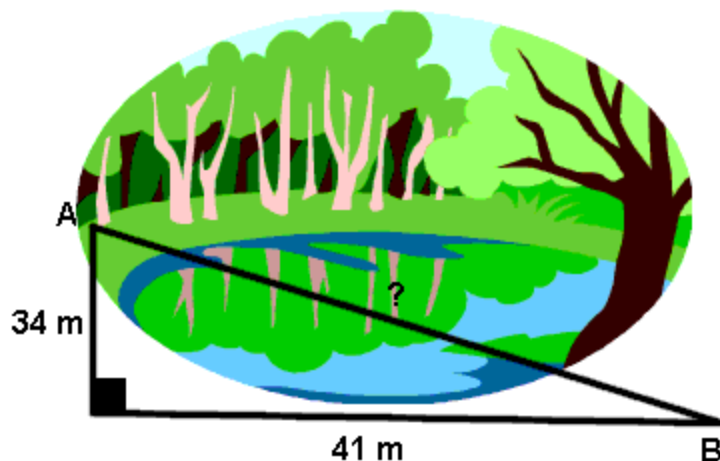


Pythagorean Theorem Word Problems

1.



Choose:

To get from point A to point B you must avoid walking through a pond. To avoid the pond, you must walk 34 meters south and 41 meters east. To the *nearest meter*, how many meters would be saved if it were possible to walk through the pond?

- ☐ 22
- ☐ 34
- ☐ 53
- ☐ 75

2.



A baseball diamond is a square with sides of 90 feet. What is the shortest distance, to the *nearest tenth* of a foot, between first base and third base?

Choose:

- ☐ 90.0
- ☐ 127.3
- ☐ 180.0
- ☐ 180.7

3.



A suitcase measures 24 inches long and 18 inches high. What is the diagonal length of the suitcase to the *nearest tenth* of a foot?

Choose:

- ☐ 2.5
- ☐ 2.9
- ☐ 26.5
- ☐ 30.0

4.



In a computer catalog, a computer monitor is listed as being 19 inches. This distance is the diagonal distance across the screen. If the screen measures 10 inches in height, what is the actual width of the screen to the *nearest inch*?

Choose:

- ☐ 10
- ☐ 14
- ☐ 16
- ☐ 19

5.



The older floppy diskettes measured $5 \frac{1}{4}$ inches on each side. What was the diagonal length of the diskette to the *nearest tenth* of an inch?

Choose:

- ☐ 5.3
☒ 6.5
☐ 7.4
☐ 7.6

6.



Ms. Green tells you that a right triangle has a hypotenuse of 13 and a leg of 5. She asks you to find the other leg of the triangle without using paper and pencil. What is your answer?

Choose:

- ☐ 5
☐ 8
☐ 10
☐ 12

7.

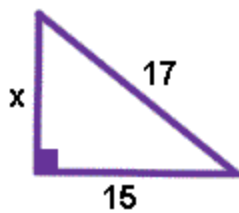


Two joggers run 8 miles north and then 5 miles west. What is the shortest distance, to the *nearest tenth* of a mile, they must travel to return to their starting point?

Choose:

- ☐ 8.4
☐ 9.5
☐ 9.4
☐ 13.1

8.



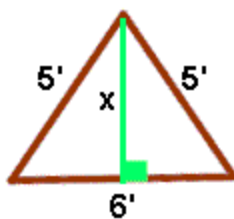
Find x

Choose:

- ☐ 6
☐ 8
☐ 10
☐ 12

9.

Choose:



Oscar's dog house is shaped like a tent. The slanted sides are both 5 feet long and the bottom of the house is 6 feet across.

What is the height of his dog house, in feet, at its tallest point?

- ☐ 3
☐ 4
☐ 4.5
☐ 5



10.

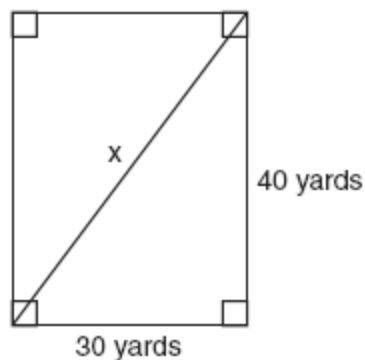


Seth made a small rectangular table for his workroom. The sides of the table are 36" and 18". If the diagonal of the table measures 43", is the table square? A table which is "square" has right angles at the corners.

Choose:

- ☐ Yes
☒ No

11.



Tanya runs diagonally across a rectangular field that has a length of 40 yards and a width of 30 yards, as shown in the diagram.

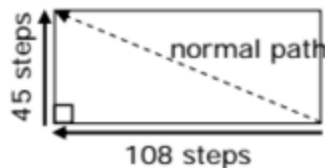
Choose:

- ☐ 50
☐ 60
☐ 70
☐ 80

What is the length of the diagonal, in yards, that Tanya runs?

12.

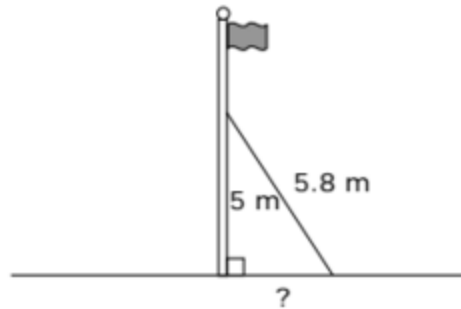
Hakim usually walks across a parking lot on his way to school to save some time. One morning the parking lot was coated with new tar that had not yet hardened, so Hakim followed the sidewalk around the parking lot to get to school. How many extra steps did Hakim have to take because of his detour?



- A 36 extra steps
 B 63 extra steps
 C 117 extra steps
 D 153 extra steps

13.

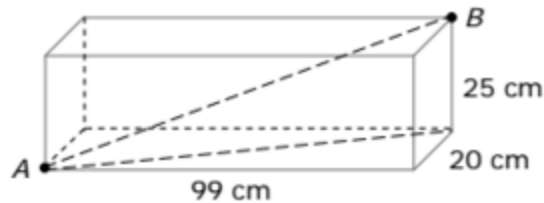
Sam wants to attach a 5.8-meter wire to a vertical pole to keep it from swaying in the wind. If he attaches the wire 5 meters up the pole, then how far from the pole, to the nearest 0.1 meter, should the other end of the wire be staked into the ground so the wire is straight?



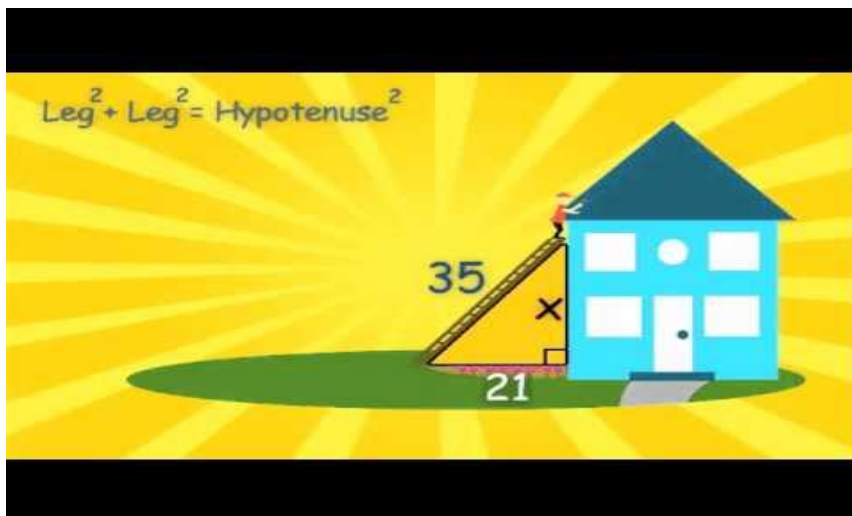
- A 0.8 meter
- B 2.9 meters
- C 5.4 meters
- D 7.7 meters

14. Practice PARCC TEST Question

A student wants to store an object diagonally, between points *A* and *B*, in a rectangular box that is 99 cm long, 25 cm high, and 20 cm wide. What is the longest that an object can be to fit in the box, positioned as described? Show all work.



15.



16.

You see an advertisement of a TV that boasts the TV is 20 inches high and 25 inches wide. Calculate the diagonal length of the TV.

17. Bonus ACT Questions

A 5-inch-by-6-inch rectangle is cut along its diagonal to form 2 triangles. What is the area of each triangle, in square inches?

18. Bonus ACT Questions

The shadows of a fence post and a nearby flagpole (both vertical and on level ground) were measured at the same time. The fence post's shadow was 3 ft long, and the flag pole's shadow was 10 ft long. If the fence post is 6 ft tall, about how many feet tall is the flagpole?