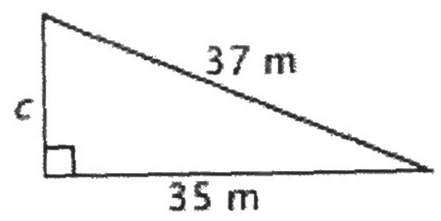
spiral # 17

name: _____
7th grade

1. Which side lengths form a right triangle?

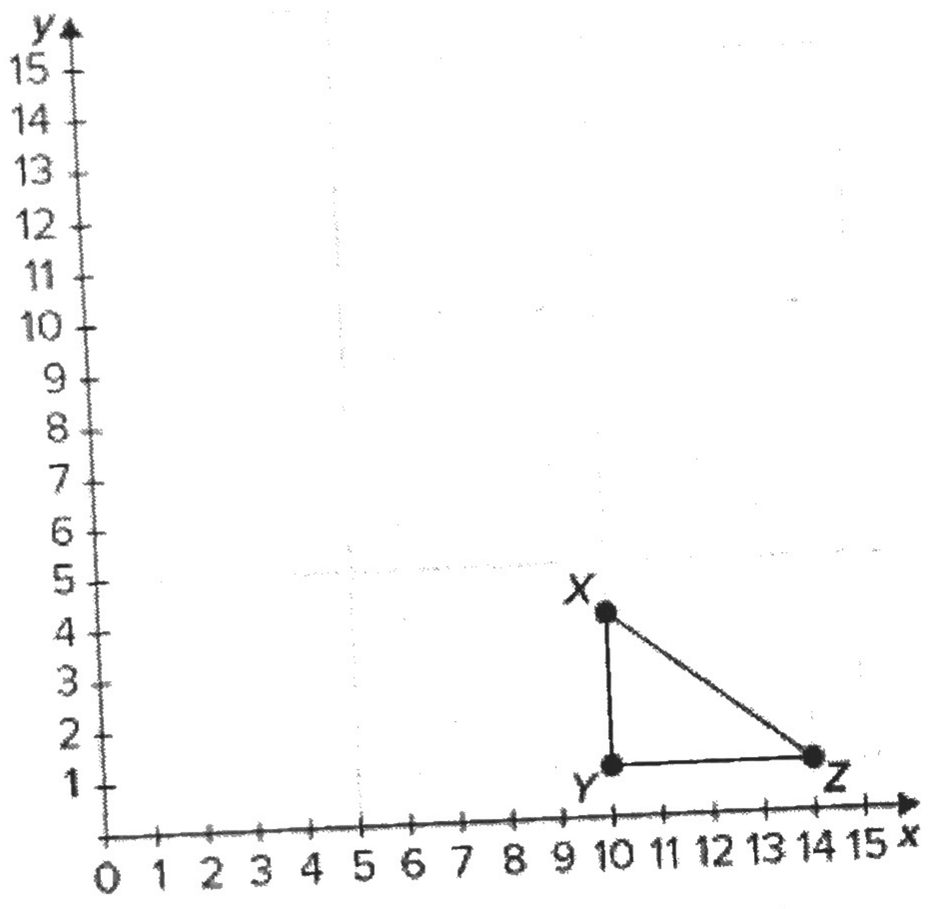
- (5 in., 5 in., 13 in.)
- (8 in., 15 in., 17 in.)
- (9 in., 18 in., 29 in.)
- (15 in., 15 in., 15 in.)

3. A triangle is shown.



Use the Pythagorean Theorem to find the missing measure.

2. A triangle is shown on a coordinate plane.



a) Fill in the table with the correct values.

Sides of ΔXYZ	Length of Side	$(\text{Length of Side})^2$
$\overline{XY}$		
$\overline{YZ}$		

b) Select all the statements that describe ΔXYZ.

- ☐ The sum of the side lengths of $\overline{XY}$ and $\overline{YZ}$ is equal to the side length of $\overline{YZ}$.
- ☐ ΔXYZ is a right triangle.
- ☐ The length of $\overline{XZ}$ is 5.
- ☐ The longest side of Δ XYZ is $\overline{XZ}$.

4

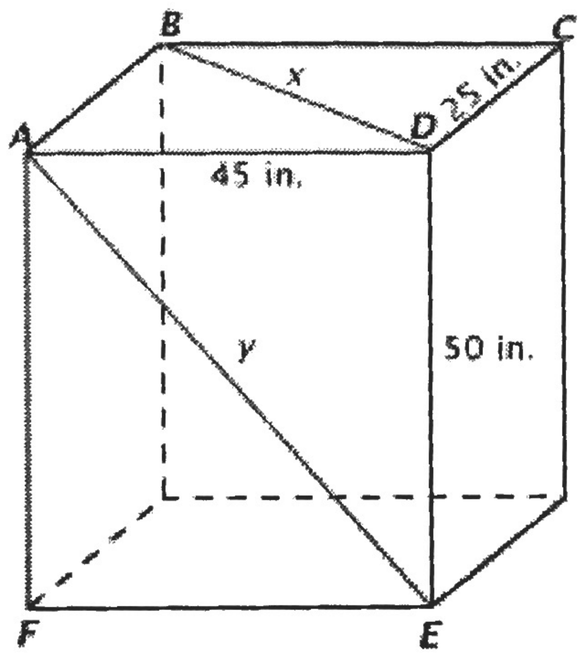
Ketty lives 63 blocks north of the church. Stan lives 16 blocks east of the church. Ketty and Stan live 65 blocks away from each other.

Which statement *best* explains why the distances between each of these points form a right triangle?

- Each distance is an even number.
- The longest distance is greater than the sum of the shorter distances.
- The sum of the longer distances is a multiple of the shortest distance.
- The square of the longest distance is equal to the sum of the squares of the shorter distances.

5

A rectangular prism has the given dimensions.

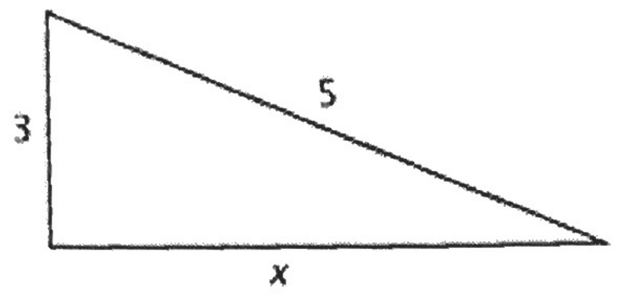


Find the diagonals x and y to select *all* the true statements.

- [ ] The hypotenuse of Δ DBC is 51.5 inches.
- [ ] The longest side of Δ ADE is 13.78 inches.
- [ ] The hypotenuse of Δ ADE is 67.3 inches.
- [ ] The longest side of Δ DBC is 11.83 inches.

6

A triangle is shown.



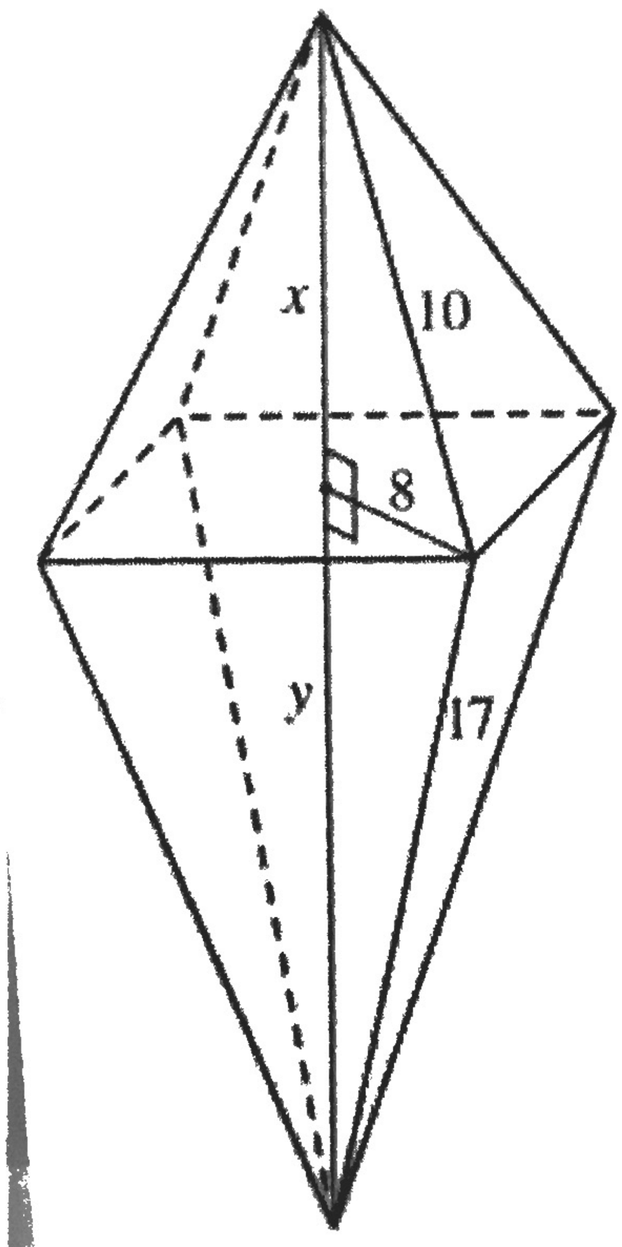
Which value of x would make this a right triangle?

7

A sailor leaves the port and sails 35 miles south. Then he turns west and sails another 35 miles.

How far is the ship from the port? Round your answer to the nearest tenth.

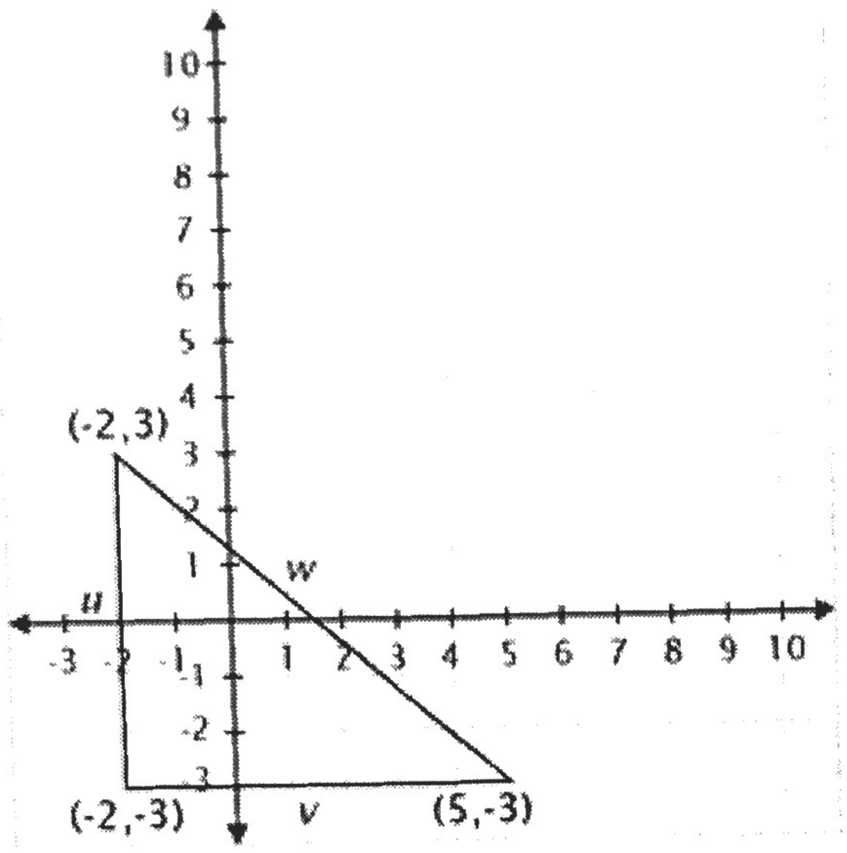
8



$x + y =$

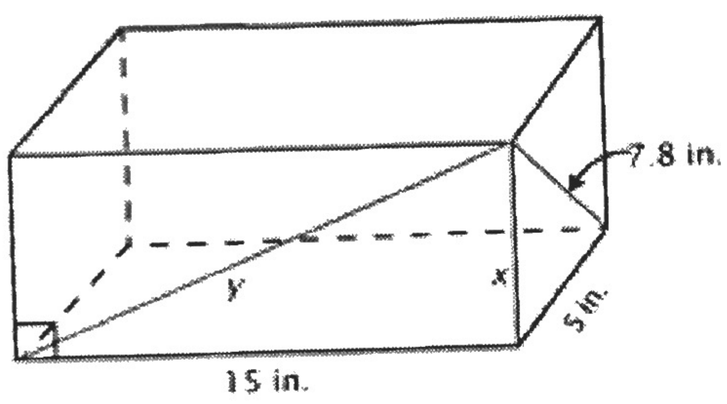
9

A graph with coordinates is shown.



Find the lengths of sides *u*, *v* and *w*. Round to the nearest tenth, if necessary.

A rectangular prism is shown.



Find x and y. Round your answers to the nearest whole number.

14

A rope is stretched from the top of a 60 feet pole to a point on the ground 11 feet away from the base of the pole.

What is the length of the rope?