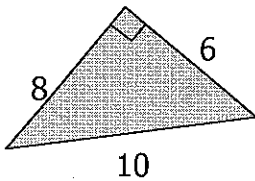


Review: Pythagorean Theorem and Distance Formula

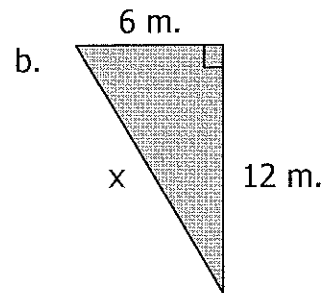
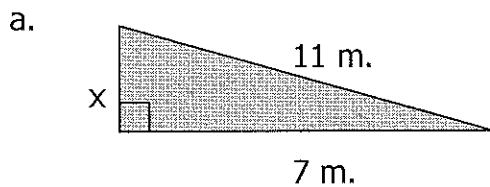
Directions:

- ✓ Please read each question carefully.
- ✓ Show all work for full credit.

1. Pythagorean theorem only works for _____ triangles.
2. The Pythagorean theorem states that _____ + _____ = _____.
3. Which of the sides on the figure below is the "hypotenuse"? How can you tell?



4. Find the missing side length, x , in each figure below...



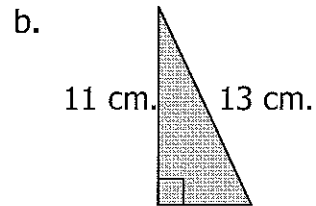
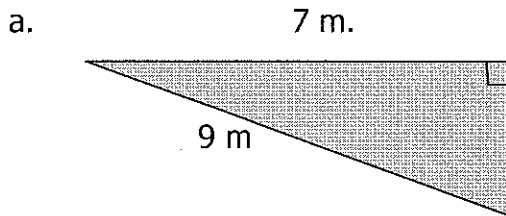
5. For each of the following groups of side lengths, determine whether or not they would form a right triangle. Be sure to explain your answer or show work to demonstrate your reasoning.

a. 15 ft., 9 ft., 12, ft.

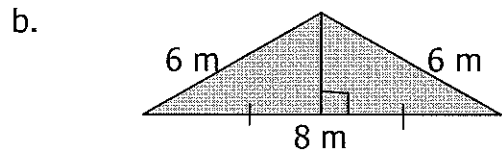
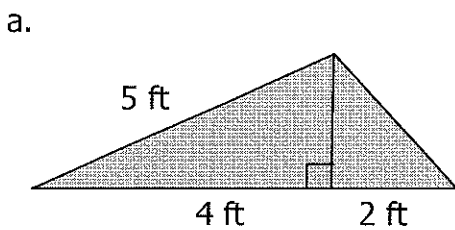
b. 2 in., 7 in., 6 in.

6. A car drives due south for 120 miles, then turns and drive due east for 200 more miles. If a plane traveled this same distance, but could fly in a straight line from the 1st destination to the 2nd, how many miles would the plane be traveling?

7. Find the **perimeter** of each figure below...



8. Find the **area** of each figure below... (Note: Area of a Triangle = $\frac{1}{2} \times \text{base} \times \text{height}$)



9. The distance between two points can be found by using the following formula...

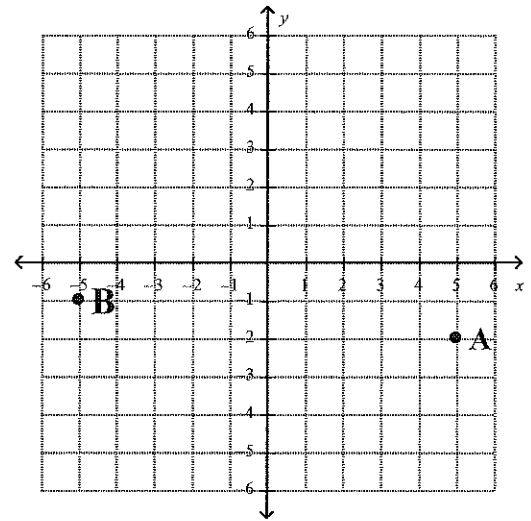
$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Use this formula to find the distance between each of the following pairs of points.

a. (1, 8) and (2, 13)

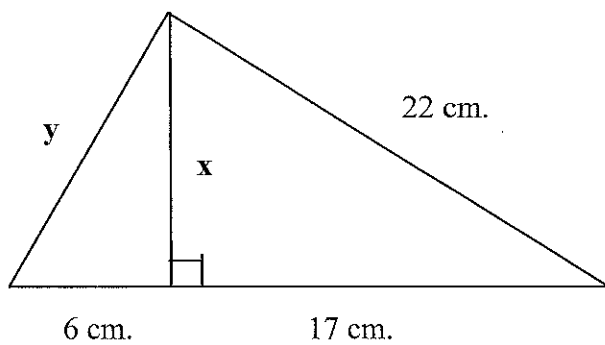
b. (-4, 7) and (6, -9)

10. Find the distance between points A and B on the grid.

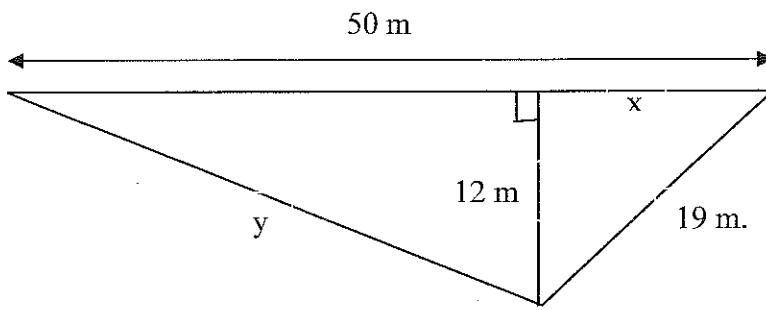


11. Find x and then y in each figure below.

a.



b.



12. Paul has a box that has dimensions 16 in. by 5 in. by 4 in. What is the longest possible length that an object could be that would fit inside the box?

