

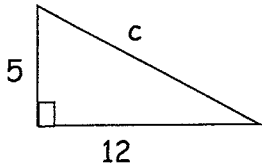
homework # 11

Name _____ Date _____ Period _____

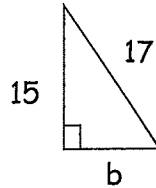
Pythagorean Theorem Problem Solving Practice

Find the missing leg or hypotenuse of the right triangle. Round answers to the nearest hundredth as needed.

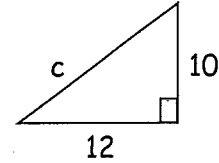
1.



2.



3.



The Pythagorean Theorem is also used to solve problems involving right triangle relationships. Use the theorem to solve the following problems.

4. A rectangle is 22 centimeters long and 5 centimeters wide. How long is the diagonal of the rectangle?

Draw picture here:

Check one:

I am looking for:

the hypotenuse

a leg

Set up and solve equation here:

$$a^2 + b^2 = c^2$$

5. A box is 55 cm long and 30 cm wide. What is the length of the longest bat that could be packed to lie flat in the box? Round to the nearest hundredth (2 decimal places)?

Draw picture here:

Check one:

I am looking for:

the hypotenuse

a leg

Set up and solve equation here:

$$a^2 + b^2 = c^2$$

6. Mrs. Pattishall has a rectangular flower garden that has a length of 30 feet. She runs a 31 foot hose diagonally across her garden. What is the width of Mrs. Pattishall's garden?

Draw picture here:

Check one:

I am looking for:

- the hypotenuse
 a leg

Set up and solve equation here:

$$a^2 + b^2 = c^2$$

7. A house painter has a 15 foot ladder that must be placed 9 feet from the house to comply with regulations. What is the height of the house if the ladder reaches the top of the house?

Draw picture here:

Check one:

I am looking for:

- the hypotenuse
 a leg

Set up and solve equation here:

$$a^2 + b^2 = c^2$$

8. A rectangle is 12 meters wide and 9 meters long. How long is its diagonal?

Draw picture here:

Check one:

I am looking for:

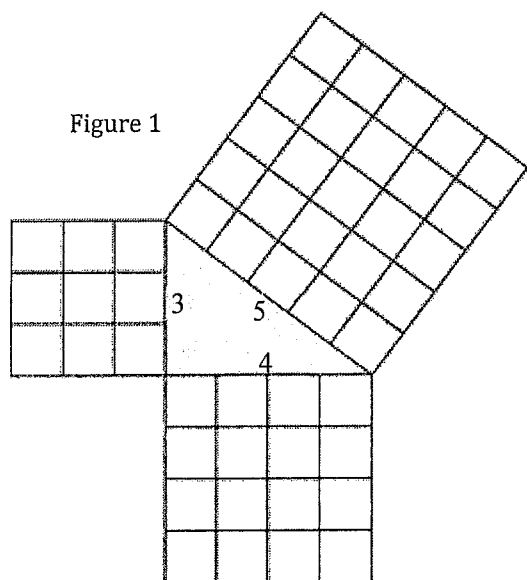
- the hypotenuse
 a leg

Set up and solve equation here:

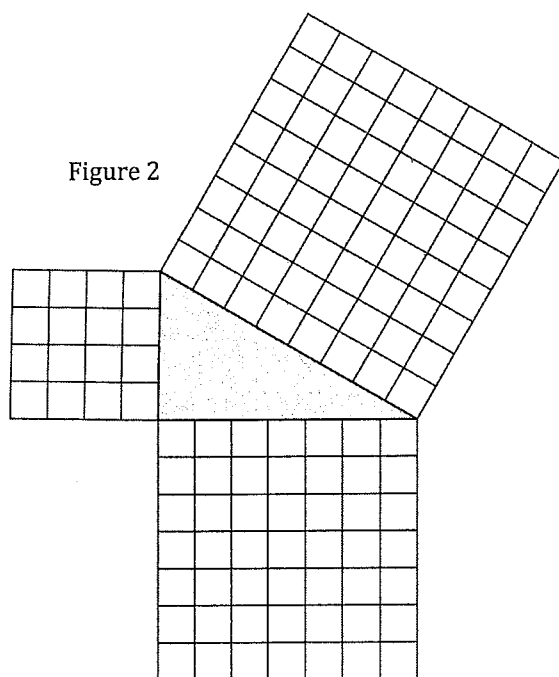
$$a^2 + b^2 = c^2$$

Name _____ Date _____

1. Explain how Figure 1 demonstrates the Pythagorean Theorem. The shaded part is a right triangle.



2. Is the shaded part of Figure 2 a right triangle? Explain how you know.



Distance on the Coordinate Plane

Name _____ Date _____

Find the distance between points A and B in the coordinate plane. Show work to justify your answer.

