

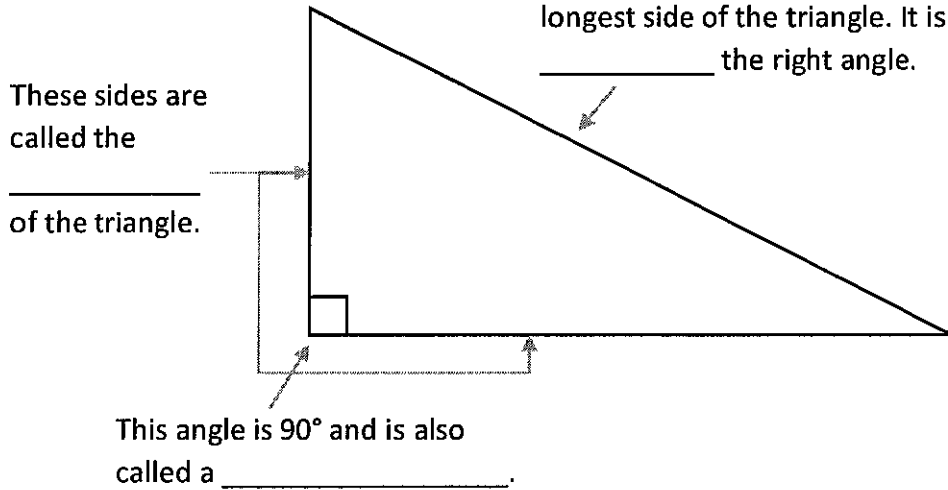
Name _____ Date _____

The Pythagorean Packet

Everything Pythagorean Theorem

Directions: Fill in each blank for the right triangle by using the words in the Vocab Box.

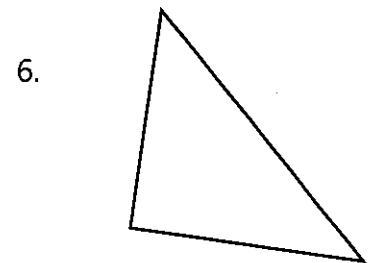
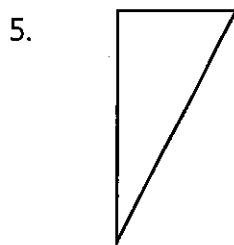
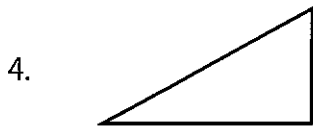
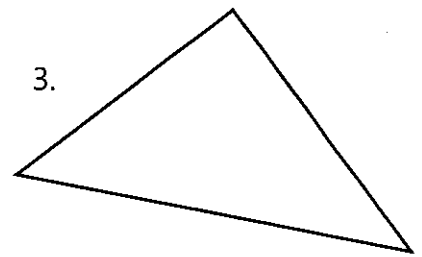
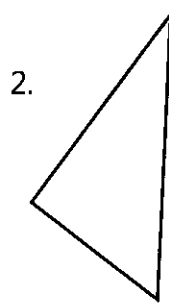
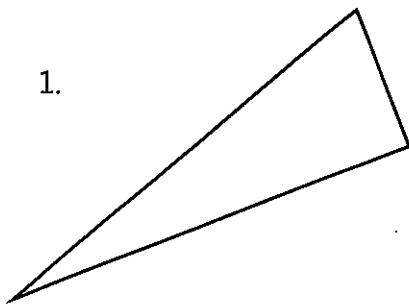
A Right Triangle



Vocab Box
Legs
Hypotenuse
Right angle
Opposite

Quick Practice

Directions: Label the hypotenuse with an "H" on each of the right triangles below.



Follow-Up Question

In the exercise above, how did you know which side of the triangle the hypotenuse was?

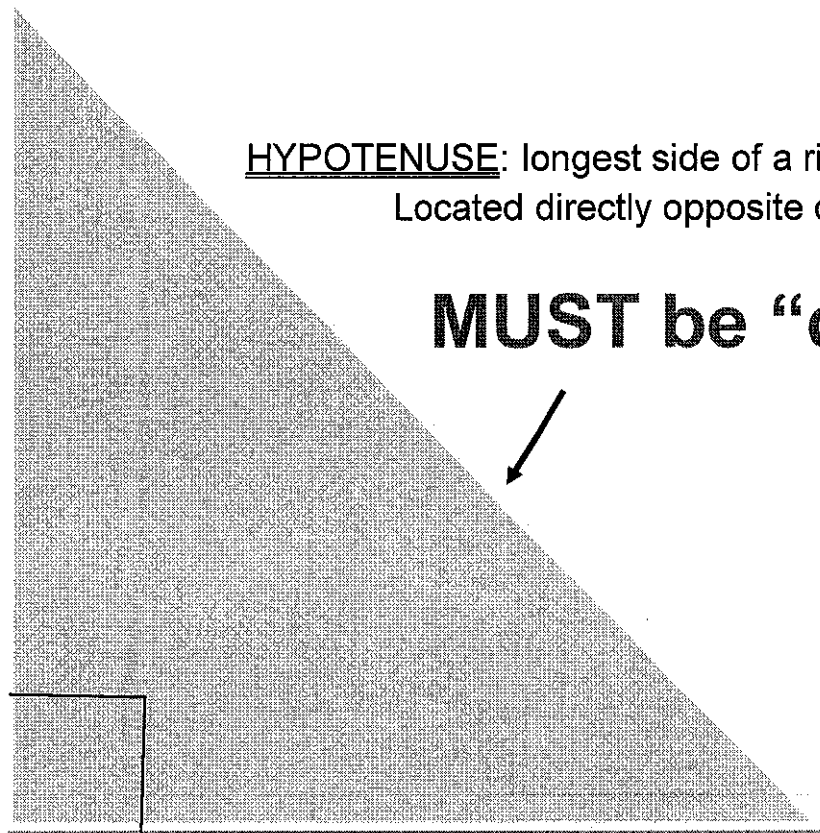
Pythagorean Theorem Facts

1. You can only use the Pythagorean Theorem on a **RIGHT** triangle (one with a 90° angle).

2. For any triangle, if **$a^2 + b^2 = c^2$**

holds true, then that triangle is a **RIGHT** triangle.

3. It doesn't really matter what leg (side) you label a or b, what matters is that **c is the HYPOTENUSE** (located directly opposite the 90° angle.)



Name _____ Date _____ Period _____

Pythagorean Theorem Practice Worksheet

SHOW ALL WORK for full credit!

I. Determine whether each set of measures can be the sides of a right triangle.

1. 3, 4, 5 2. 5, 5, 10 3. 8, 12, 13 4. 26, 24, 10

II. Use the Pythagorean Theorem to find the length of the missing third side. Round to the nearest tenth if necessary.

5. $a=5$, $b=7$, $c=$ _____

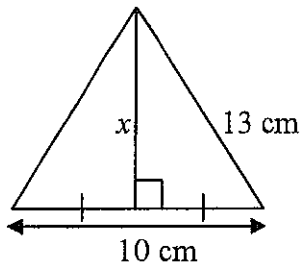
6. $a=$ _____, $b=8$, $c=10$

7. $a=9$, $b=$ _____, $c=15$

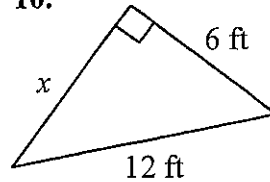
8. $a=$ _____, $b=4/12$, $c=5/12$

III. Find the value of each variable. Round to the nearest tenth.

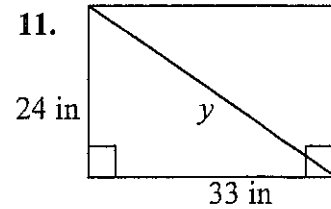
9.



10.



11.



Read each problem carefully. Start by drawing a picture to illustrate each problem.

12. Maria leaves her house and walks north 6 blocks. She then turns and heads east 8 blocks until she reaches Sally's house. What's the shortest distance between Sally's house and Maria's house?

13. Adrian is standing on the ground 12 ft from the base of a tree that is 5 ft tall. Sofi is standing on the ground 8 ft closer to the base of the tree than Adrian. What's the distance from Adrian's location on the ground to the top of the tree? What's the distance from Sofi's location on the ground to the top of the tree?

14. Find the perimeter of a square with diagonal 10 centimeters. Round to the nearest tenth.

15. Determine whether the following statement is TRUE or FALSE. If FALSE, provide a counterexample. "The lengths of the three sides of any isosceles triangle always satisfy the Pythagorean Theorem."