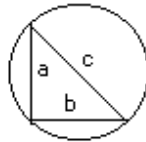


Circumscribed Circles Of A Right Triangle:

- A. Most of the time on a number sense test the question will give you the sides of a right triangle and ask you to find the value of the radius of a circumscribed circle. Here is a picture of what is happening:



- B. Just from observing, it appears that the hypotenuse of the triangle is the diameter of the circle. This is in fact true. So to find the radius, divide the hypotenuse by 2.
- C. Examples:

Ex [1] Find the radius of a circumscribed circle of a 5, 12, 13 triangle.

- a. The answer is $13/2$. Be careful though, sometimes the question asks for the diameter and not the radius.

Ex [2] Find the radius of a circumscribed circle of a right triangle with a leg of 13.

- a. In this example we will need to *derive a Pythagorean triple*.
- b. We know that the other legs are 84 and 85. So the answer is $85/2$.