NAME _____

MATH ___ DATE _____

7.G.5 Identify the right angle, hypotenuse, and legs of a right triangle

Vocabulary

right triangle a triangle that has one right angle

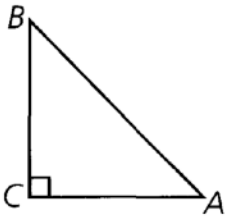
right angle an angle that measures exactly 90°

hypotenuse the longest side of a right triangle; the side opposite the right angle

leg either of the two shorter sides of a right triangle; the legs are adjacent to the right angle

adjacent side a side next to a particular angle

opposite side the side across from a particular angle



Study

Look at $\triangle ABC$. What kind of triangle is it? What does it mean for an angle or side of a right triangle to be opposite or adjacent?
Which side is opposite $\angle A$? Which side is opposite $\angle B$? Which side is opposite $\angle C$?
Which sides are adjacent to $\angle A$? to $\angle B$? to $\angle C$?

An angle marked with the small box in the corner is a right angle; it measures 90o. Right triangles have special characteristics and they have special terms to describe their sides. The two shorter sides next to, or adjacent to, the right angle are the legs. The legs are perpendicular to each other, that is, they form a right angle. The longer side across from, or opposite, the right angle is the hypotenuse. The term nonadjacent is also used to describe a side that is opposite an angle or an angle that is opposite.

To identify opposite sides:

Locate each angle and move across the triangle.

The side opposite $\angle A$ is $\overline{BC}$.

The side opposite $\angle B$ is _____.

The side opposite $\angle C$ is _____.

$\angle C$ is a right angle, so $\overline{AB}$ is the _____.

To identify adjacent sides:

Locate each angle and find the sides next to it.

The side adjacent to $\angle A$ is $\overline{AC}$.

The side adjacent to $\angle B$ is _____.

_____ and _____ are called legs because they are the sides that form the right angle, $\angle C$.