Grade: 8 Math Benchmark #: 8.3.1.K6a-b Pythagorean Theorem	Mastery Check 3	

State Language: Uses the Pythagorean Theorem: a) determine if a triangle is a right triangle: b) find a missing side of a right triangle where the lengths of all three sides are whole numbers.	Student Friendly Language: Knowing the Pythagorean Theorem to determine whether a triangle is a right triangle and to find the missing side of a right triangle.	
Concept (Students will know): - The formula for the Pythagorean Theorem - Know that the hypotenuse is the "diagonal" line. - That the legs form the right angle of a right triangle. - When a rectangle is cut diagonally, the length is the hypotenuse. - The definition of "legs" and "hypotenuse". - Squares and square roots. - That when the leg of a side of a right triangle is unknown, you would subtract using the Pythagorean Theorem. - That the sums of the legs of a right triangle are equal to the square of the hypotenuse. - whether a triangle is a right triangle.	**Skills** (Students will do): - Determine which sides of a right triangle are the legs and the hypotenuse. - Find the hypotenuse of a right triangle when the legs are known. - Find the length of the legs when the diagonal line (hypotenuse) is known. - Determine whether a triangle is a right triangle by using the Pythagorean Theorem.	**DOK Level:** 2

Big Ideas:
Realizing that when you see a four-sided shape that has right angles, the diagonal is the hypotenuse. You can find the lengths of the sides that form a right triangle if the other parts are known and you can find the diagonal when you know the lengths of the sides that form the right angle.

Essential Questions:
- Which sides of a right triangle are the legs and which side is the hypotenuse?
- What is the square of 10?
- Determine the square root of 225?
- What is the Pythagorean Theorem?
- How can you tell which side of a right triangle is the hypotenuse?
- How do you find the length of the legs when the hypotenuse is known?
- What is the length of the diagonal (hypotenuse) when the legs are 3 ft. and 4 ft?

Core Materials Glencoe Pre-Algebra book	Supplemental Materials: Resource materials from the Glencoe series Triangle shapes to work with. Teacher-generated materials Study Island BAIP Other technology

Teaching Strategies:
Have a square and show how the Pythagorean Theorem is proven.

Mastery Check Items: