

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: