

Exercise Set 4.1: Special Right Triangles and Trigonometric Ratios

Answer the following.

1. If two sides of a triangle are congruent, then the _____ opposite those sides are also congruent.
2. If two angles of a triangle are congruent, then the _____ opposite those angles are also congruent.
3. In any triangle, the sum of the measures of its angles is _____ degrees.
4. In an isosceles right triangle, each acute angle measures _____ degrees.
5. Fill in each missing blank with one of the following: *smallest, largest*
In any triangle, the longest side is opposite the _____ angle, and the shortest side is opposite the _____ angle.
6. Fill in each missing blank with one of the following: 30° , 60° , 90°
In a 30° - 60° - 90° triangle, the hypotenuse is opposite the _____ angle, the shorter leg is opposite the _____ angle, and the longer leg is opposite the _____ angle.

For each of the following,

- (a) Use the theorem for 45° - 45° - 90° triangles to find x .
- (b) Use the Pythagorean Theorem to verify the result obtained in part (a).

