Name: _____ Date: _____

1. The side lengths of 3 different right triangles are listed below. For each triangle, determine which measure is the hypotenuse of the triangle.

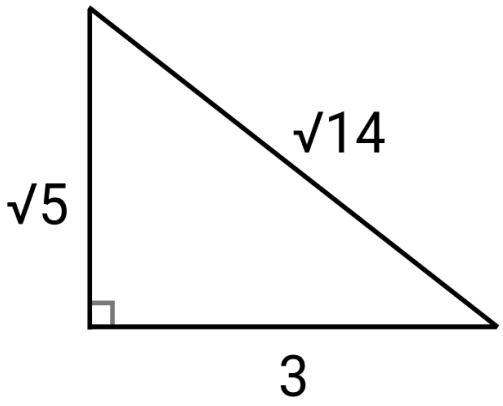
a. Triangle A: 6 cm, 10 cm, 8 cm

b. Triangle B: $\sqrt{61}$ in, 6 in, 5 in

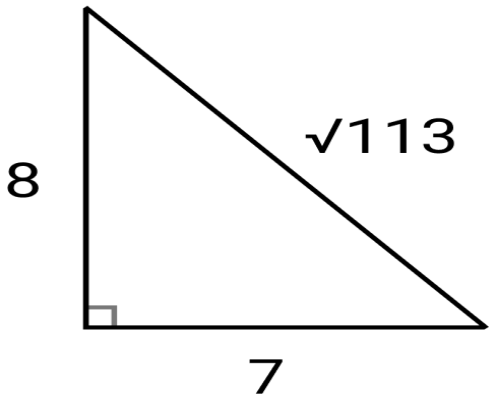
c. Triangle C: 4 m, 8 m, $\sqrt{48}$ m

2. Use the Pythagorean theorem to show that the triangles below are right triangles.

a.



b.



3. The lengths of the three sides are given for several right triangles. For each, write an equation that expresses the relationship between the lengths of the three sides.

a. $10, 6, 8$

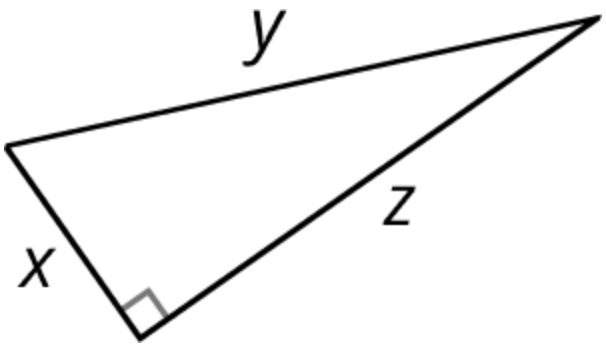
b. $\sqrt{8}, \sqrt{5}, \sqrt{3}$

c. $5, \sqrt{5}, \sqrt{30}$

d. $1, \sqrt{37}, 6$

e. $3, \sqrt{2}, \sqrt{7}$

4. Gina drew a right triangle and labeled the side lengths x, y, and z, as shown below.



Gina wrote the equation $z^2 = x^2 + y^2$to represent the relationship between the side lengths of the triangle. Did Gina write a correct equation? Explain why or why not.

5. For each set of numbers below, identify 3 measures that could be used to create a right triangle. Justify your selection.

a. $2, 3, 4, 5$

b. $5, 10, 12, 13$

c. $3, \sqrt{27}, 6, 9$

d. $\sqrt{12}, 5, 6, \sqrt{37}$