Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_

Standard: M8G2.a. Apply the properties of right triangles, including the Pythagorean Theorem

M8G2.b. Recognize and interpret the Pythagorean Theorem as a statement about the areas of squares on the sides of a right triangle.

**Find the missing side.** **SHOW YOUR WORK!!!**  **Circle your answer!**

1. **4.**

 15 17 29 21

 12

1. **5.**

 16 24

 7

1. **6.** 12

 6 10 5

**Use your knowledge associated with the Pythagorean Theorem to answer the following questions.**

7. Two planes leave the airport at the same time. One plane flies 24 miles south to Miami and the other plane flies 10 miles east to Jacksonville. How far apart are the planes? (Draw a diagram.)

8. Isaiah and Andre are at the Falcons game. Once the game is over, Isaiah rides his bike 3 miles east to the Italian restaurant and Andre runs 4 miles north to the bus station. How far apart are they? (Draw a diagram.)

9. A triangle has legs that are 9 cm and 12 cm long. What is the area of a square if I used the hypotenuse as a side? (Draw a diagram.)

10. A triangle has a hypotenuse that is 20 cm long. One of the legs is 16 cm long. What is the area of a square if I used the OTHER leg as a side? (Draw a diagram.)