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

**Geometry – Pythagorean Theorem Warm-Up**

Directions: Using what you know about Pythagorean Theorem, find the missing variables.

1. w = \_\_\_\_\_\_ 2. z = \_\_\_\_\_\_





3. Now, consider your answer for z in #2. Write a mathematical argument to justify your answer.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**Key**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_

**Geometry – Pythagorean Theorem Warm-Up**

Directions: Using what you know about Pythagorean Theorem, find the missing variables.

1. w = \_\_\_\_\_\_ 2. z = \_\_\_\_\_\_





1. 62 + 22 = w2 36 + 4 = w2 40 = w2 $√40$ = w $√40$ = 2$√10$

2. 72 + z2 = 252 49 + z2 = 625 z2 = 625-49 z2 = 576 $\sqrt{z^{2}}=$$√576$ z = 24

3. Now, consider your answer for z in #2. Write a mathematical argument to justify your answer.

Because the triangle in #2 is a right triangle, I can use the Pythagorean Theorem to solve for z. I knew I was solving for a leg, so I can put z in for “b” in the Pythagorean Theorem. I set up the equation as 72 + z2 = 252 and solved to get z = 24.

The answer should include:

* Using the Pythagorean Theorem because it’s a right triangle
* Identifying the missing side as either the leg or hypotenuse, and connecting it to their equation (“leg means a or b”, “c means hypotenuse”, or z is a leg so I used the equation 72 + z2 = 252)