**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per.\_\_\_\_\_\_\_**

### U15 CWK #2 *The Pythagorean Theorem and Unknown Side Lengths*

**Directions:** Find the length of the hypotenuse of each right triangle shown below using the Pythagorean Theorem. Leave your answer in simplest radical form. Show ALL steps including writing the formula.

|  |  |
| --- | --- |
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**Directions:** Find the length of the leg of each right triangle shown below using the Pythagorean Theorem. Leave your answer in simplest radical form. Show ALL steps.

|  |  |
| --- | --- |
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|  |  |

**Directions:** Find the value of *x* using the Pythagorean Theorem. Leave your answer in simplest radical form.

|  |  |
| --- | --- |
|  |  |
|  |  |

1. **Find, Fix, and Justify:** Megan was asked to solve for the unknown side length in the triangle below. Her work is shown below. She made a mistake when solving. Explain the mistake she made and then solve the problem correctly.

**Megan’s Solution: Correct Solution:**

**Explain Mistake:**

1. **Find, Fix, and Justify:** Raphael was asked to solve for the length of the hypotenuse in a right traingle with legs that have side lengths of 4 and 5. His work is shown below. He made a mistake when solving. Explain the mistake and then solve the problem correctly.

**Raphael’s Solution: Correct Solution:**

**Explain Mistake:**