

Chapter 1 Pythagorean Theorem I The Meaning

Worksheet C Mixed Practice and Application

Name: _____ Grade: _____ Date: _____

1. Explain Before Solving

A right triangle has legs 10 m and 24 m.

a. Which side is missing?

b. Why can you use the Pythagorean theorem?

c. Find the missing side.

2. Student Error

A student says:

$$7^2 = 14$$

Explain the mistake.

3. Is It a Right Triangle?

A triangle has side lengths 9, 12, and 15.

a. Which side should be used as c ?

b. Check whether the triangle is right-angled.

c. Explain your conclusion.

4. Not Enough Information

A triangle has side lengths 4 cm, 5 cm, and 6 cm.

A student says:

“I can use the Pythagorean theorem because it is a triangle.”

Explain why that thinking is wrong, then check whether the triangle is right-angled.

5. Square Units Trap

A student finds a hypotenuse and writes:

$$13 \text{ cm}^2$$

Explain why the unit is wrong.

6. Meaning of the Theorem

In your own words, explain what:

$$a^2 + b^2 = c^2$$

means for a right triangle.