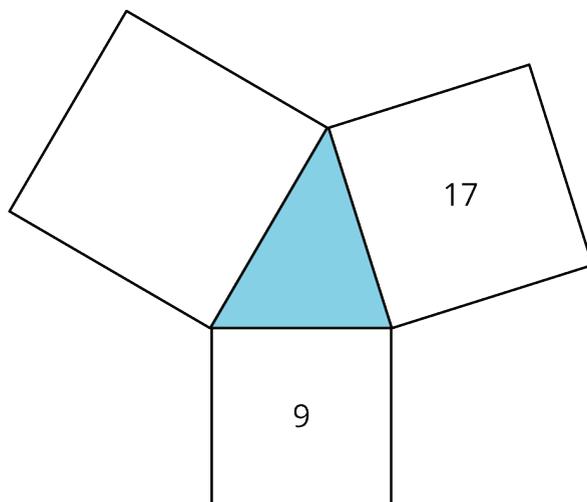


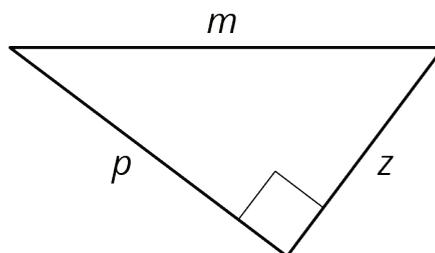
## Lesson 5 Practice Problems

1. Here is a diagram of an acute triangle and three squares.



Priya says the area of the large unmarked square is 26 square units because  $9 + 17 = 26$ . Do you agree? Explain your reasoning.

2.  $m$ ,  $p$ , and  $z$  represent the lengths of the three sides of this right triangle.



Select **all** the equations that represent the relationship between  $m$ ,  $p$ , and  $z$ .

A.  $m^2 + p^2 = z^2$

B.  $m^2 = p^2 + z^2$

C.  $m^2 = z^2 + p^2$

D.  $p^2 + m^2 = z^2$

E.  $z^2 + p^2 = m^2$

F.  $p^2 + z^2 = m^2$

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

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

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

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

4. A one-quart container of tomato soup is shaped like a rectangular prism. A soup bowl shaped like a hemisphere can hold 8 oz of liquid. How many bowls will the soup container fill? Recall that 1 quart is equivalent to 32 fluid ounces (oz).

(From Unit 6, Lesson 13.)

5. Which is the best explanation for why  $-\sqrt{10}$  is irrational?

- A.  $-\sqrt{10}$  is irrational because it is not rational.
- B.  $-\sqrt{10}$  is irrational because it is less than zero.
- C.  $-\sqrt{10}$  is irrational because it is not a whole number.
- D.  $-\sqrt{10}$  is irrational because if I put  $-\sqrt{10}$  into a calculator, I get  $-3.16227766$ , which does not make a repeating pattern.

(From Unit 8, Lesson 3.)

6. A teacher tells her students she is just over 1 and  $\frac{1}{2}$  billion seconds old.

- a. Write her age in seconds using scientific notation.
- b. What is a more reasonable unit of measurement for this situation?
- c. How old is she when you use a more reasonable unit of measurement?

(From Unit 7, Lesson 14.)