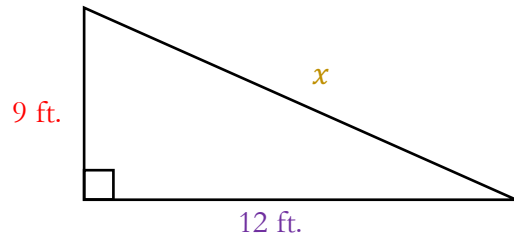


Given the right triangle below, find the missing side length.



Kaden's "Addition" Method

The Pythagorean Theorem says that the two smaller lengths add to the longest length.

$$a + b = c$$

I plug the values into the Pythagorean Theorem and solve for x .

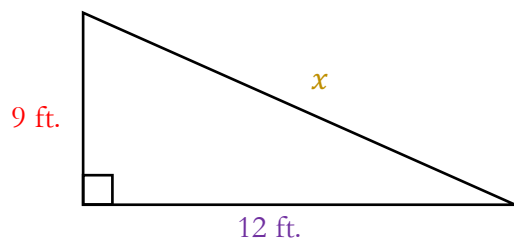
$$9 + 12 = x$$

The length of the unknown side is 21 ft.

$$21 = x$$



Given the right triangle below, find the missing side length.



Maddie's "Squared" Method

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

$$9^2 + 12^2 = x^2$$

$$81 + 144 = x^2$$

$$225 = x^2$$

$$15 = x$$

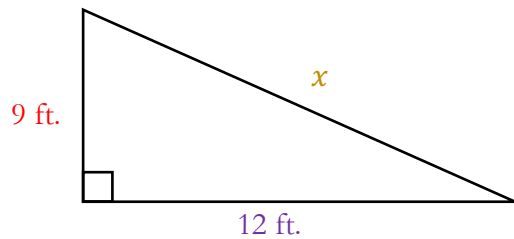
The Pythagorean Theorem says that the sum of the squares of the two smaller sides is the same as the square of the longest side.

I plug the values into the Pythagorean Theorem and solve for x .

The missing side length is 15 ft.



Given the right triangle below, find the missing side length.



Kaden's "Addition" Method

The Pythagorean Theorem says that the two smaller lengths add to the longest length.

I plug the values into the Pythagorean Theorem and solve for x .

The length of the unknown side is 21 ft.

$$a + b = c$$

$$9 + 12 = x$$

$$21 = x$$



Maddie's "Squared" Method

The Pythagorean Theorem says that the sum of the squares of the two smaller sides is the same as the square of the longest side.

I plug the values into the Pythagorean Theorem and solve for x .

The missing side length is 15 ft.

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

$$9^2 + 12^2 = x^2$$

$$81 + 144 = x^2$$

$$225 = x^2$$

$$15 = x$$



P.2: *Missing Length*

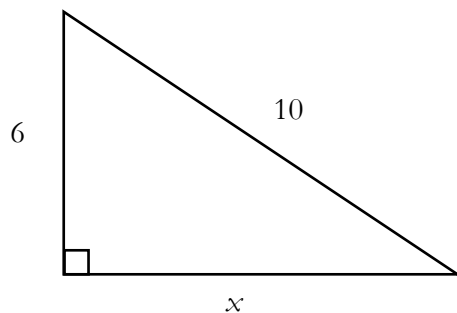
1) What are the similarities and differences between Kaden and Maddie's methods?

Similarities	Differences

2) Kaden and Maddie got different answers. Can they both be correct? If not, who is correct, and how do you know?

3) Does it matter that Maddie used 9 for a and 12 for b ? Why, or why not?

4) Find the missing side of the right triangle in the diagram.



Given the right triangle

I'm so frustrated with myself! How could I forget that you have to square the side lengths before adding them, and then you have to take the square root to get your final answer?

Pythagoras would be so mad at me...

Kaden

The Pythagorean Theorem says that the two smaller side lengths add to the longest length.

I plug the values into the Pythagorean Theorem and solve for x .

The length of the unknown side is 21.

The longest side is 25.

I plug the values into the Pythagorean Theorem and solve for x .

$$25 = x^2$$

$$15 = x$$

The missing side length is 15 ft.

$$21 = x$$

