

### EXPLANATION

1. The first step is to identify the given information. We are given a right triangle with a hypotenuse of length 10 and one leg of length 6. We are asked to find the length of the other leg.

2. We can use the Pythagorean theorem, which states that in a right triangle, the square of the hypotenuse is equal to the sum of the squares of the two legs.

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

3. In this case, we know the hypotenuse  $c = 10$  and one leg  $a = 6$ . We need to find the length of the other leg  $b$ .

$$6^2 + b^2 = 10^2$$
$$36 + b^2 = 100$$
$$b^2 = 100 - 36$$
$$b^2 = 64$$
$$b = \sqrt{64}$$
$$b = 8$$

4. Therefore, the length of the other leg is 8.

Step	Explanation	Equation
1	Identify the given information.	
2	Use the Pythagorean theorem.	$a^2 + b^2 = c^2$
3	Substitute the known values.	$6^2 + b^2 = 10^2$
4	Simplify the equation.	$36 + b^2 = 100$
5	Isolate $b^2$ .	$b^2 = 100 - 36$
6	Calculate the value of $b^2$ .	$b^2 = 64$
7	Take the square root of both sides.	$b = \sqrt{64}$
8	Final answer.	$b = 8$

### LINGSTON



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8	Final answer.	$b = 8$