

The Pythagorean theorem is a fundamental relation in geometry that applies to right triangles. It states:

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

where a and b are the lengths of the legs (the two sides perpendicular to each other), and c is the length of the hypotenuse (the side opposite the right angle).

In your case, both legs are 2.4 inches:

- $a = 2.4$ inches
- $b = 2.4$ inches

Step-by-step, here is how to find c :

1. First, square both sides:
 $a^2 = (2.4)^2 = 5.76$
 $b^2 = (2.4)^2 = 5.76$
2. Add the squares:
 $a^2 + b^2 = 5.76 + 5.76 = 11.52$
3. Take the square root of the sum to find c :
 $c = \sqrt{11.52}$
4. Calculate the square root:
 $c \approx 3.394$ inches

Answer: The length of side c (the hypotenuse) is approximately *3.39 inches*.