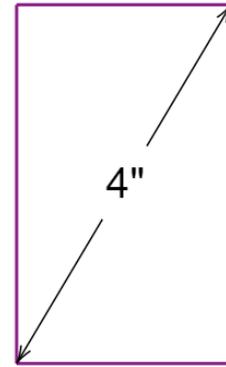


Pythagorean Theorem at Best Buy

Choosing the right phone screen size can be a daunting task - I'm going to need your help!

I need a phone that fits in my hand, and I must be able to reach the top of the screen with one hand.

The problem is that the screen size is given as a diagonal measurement, so a 4 inch screen looks like this.



My phone screen must be:

- No wider than 3.3 inches.
- No longer than 4.4 inches.

Task 1) Sketch my new phone in the box. Mark the given measurements on the sides and draw a straight line from one corner to the opposite corner. Spot the right-angles and mark one with \square

Task 2) Please use the Pythagorean theorem, $a^2 + b^2 = c^2$, to find out the biggest diagonal screen size I can buy.

Answer: _____

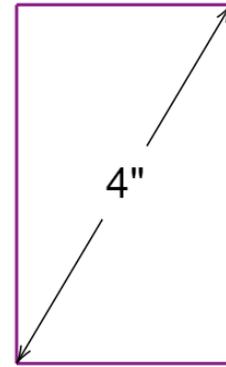
Thank you for your help!

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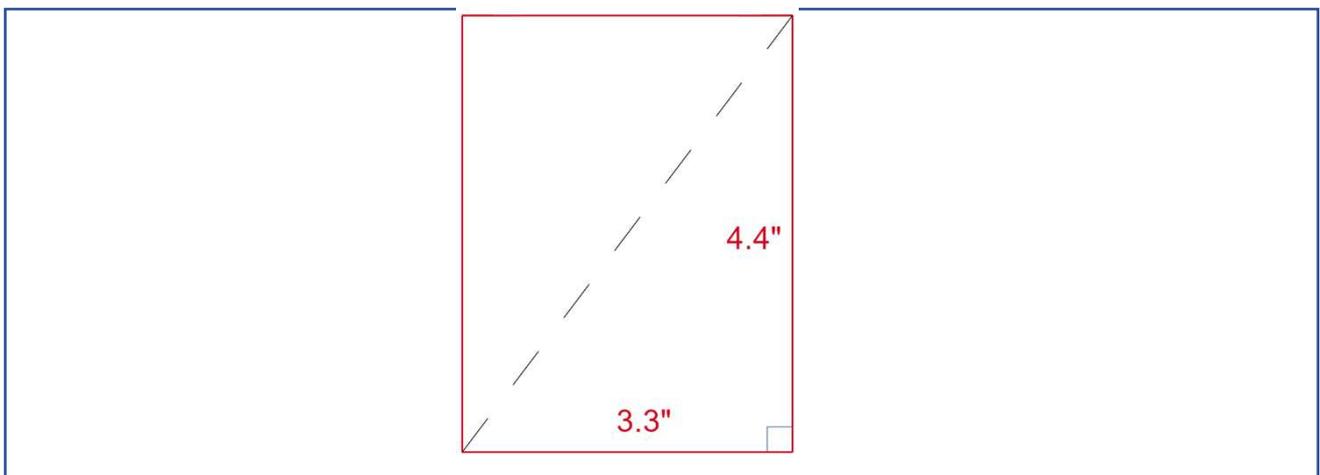
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$a = 3.3$	$b = 4.4$	
$a^2 = 10.89$	$b^2 = 19.36$	$c^2 = a^2 + b^2$
$a^2 + b^2 = 10.89 + 19.36$		$c = \sqrt{a^2 + b^2}$
$= 30.25$		$= \sqrt{30.25}$
		$= 5.5$

Answer: 5.5 inches

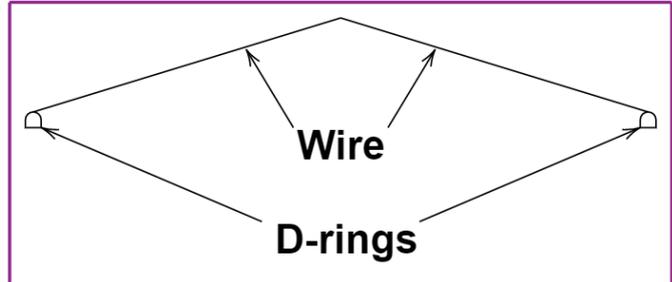
Thank you for your help!

Pythagorean Theorem When Hanging Paintings and Pictures

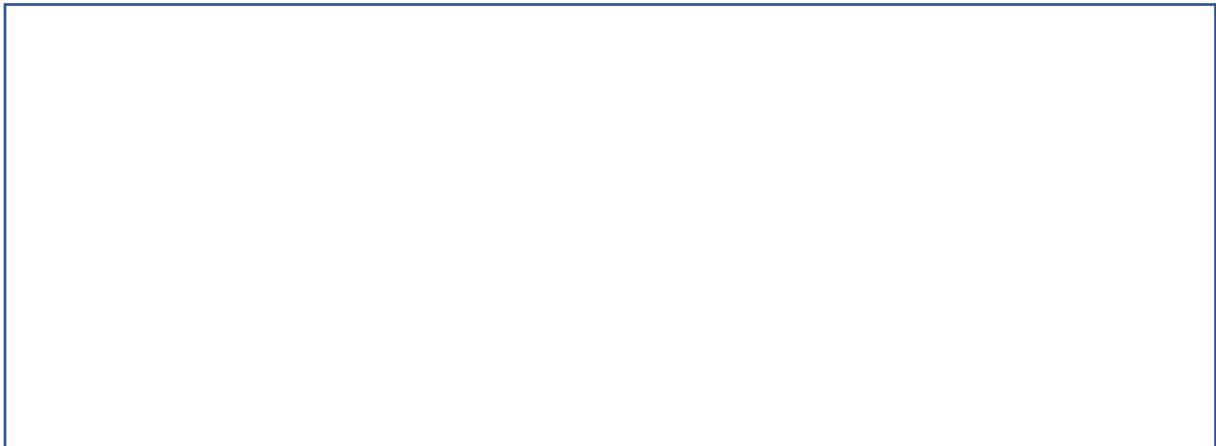
It's nice to display your own artwork or a picture of your friends, but it's best when you don't see the string behind it. Thank goodness for the Pythagorean theorem!

I have a picture frame to hang in my house and I need your help, please!
The back of it looks like this. 

The D-rings are 2.2m apart and 0.5m below the top of the picture frame.



Task 1) Sketch the back of the picture frame. Include the measurements and the mark L on the two right-angles made by the wire and the D-rings. Label "c" on the hypotenuses made by the wire.



Task 2) Using the Pythagorean theorem, find out how long my wire can be. Give the answer to 2 decimal places, and please round it down so the string doesn't show!



Answer: _____

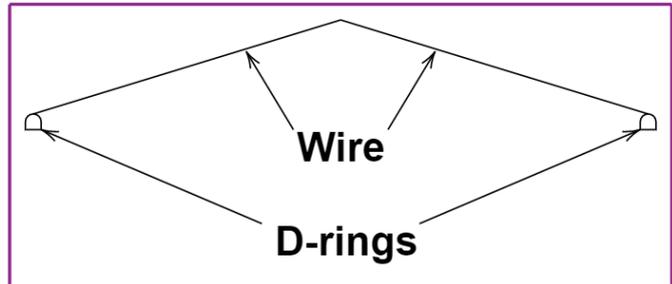
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Pythagorean Theorem When Hanging Paintings and Pictures

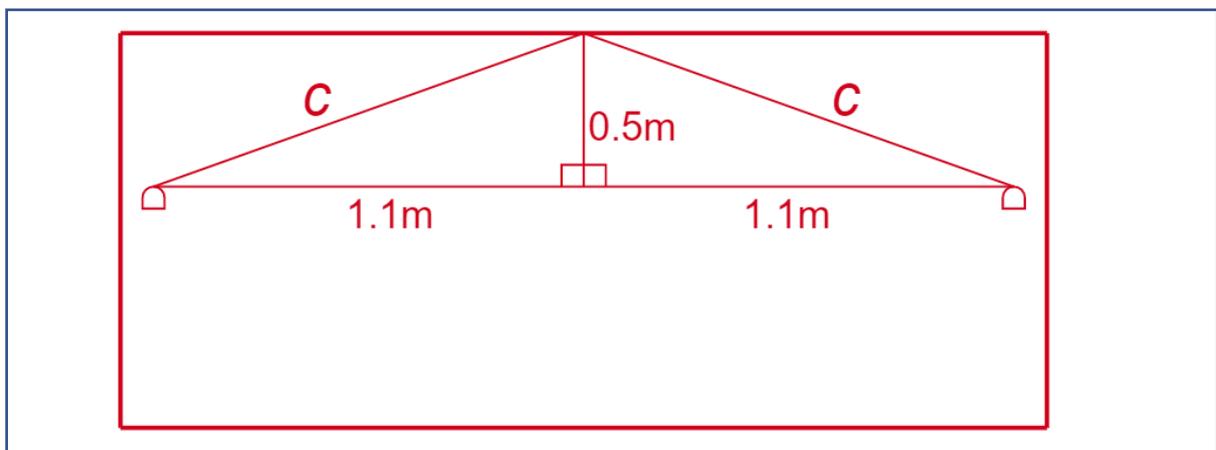
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Task 1) Sketch the back of the picture frame. Include the measurements and the two right-angles triangles made by the wire and the D-rings. Label "c" on the hypotenuses made by the wire.



Task 2) Using the Pythagorean theorem, find out how long my wire can be. Give the answer to 1 decimal place, and please round it down so the string doesn't show!

$$c^2 = 1.1^2 + 0.5^2$$

$$c^2 = 1.21 + 0.25$$

$$c^2 = 1.46$$

$$c = \sqrt{1.46}$$

$$c = 1.208...$$

$$2c = 2.416...$$

Answer: 2.4m

Thank you for your help!