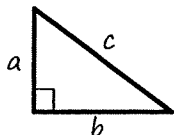


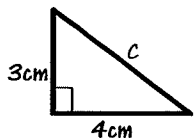
Pythagorean Theorem

Consider any right triangle where the short sides have lengths a and b and the hypotenuse has length c .

Then the Pythagorean theorem is $a^2 + b^2 = c^2$:

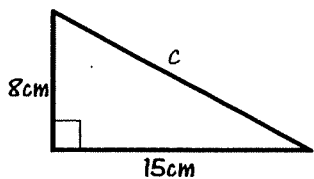


Example

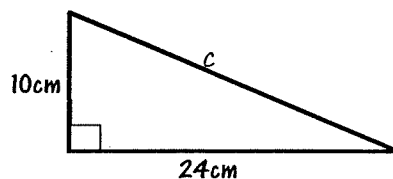


Using the theorem, you have $3^2 + 4^2 = c^2$
 $9 + 16 = c^2$
 $25 = c^2$
 $\sqrt{25} = c$
 $5 = c$

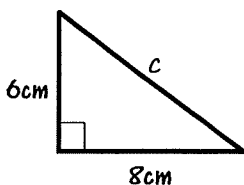
Using the Pythagorean theorem, calculate the value of c and draw an arrow to the matching answer in the middle of the worksheet.



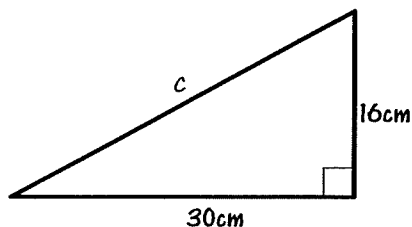
34cm



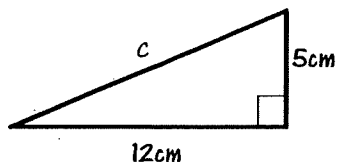
30cm



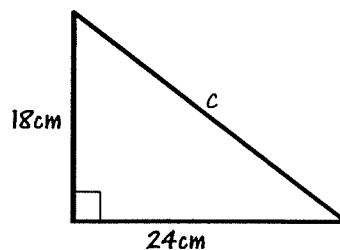
50cm



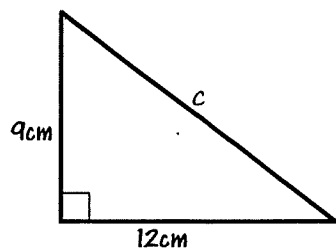
17cm



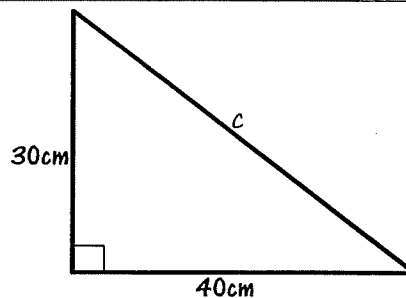
26cm



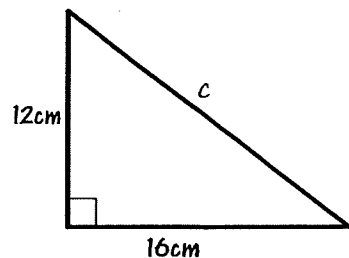
10cm



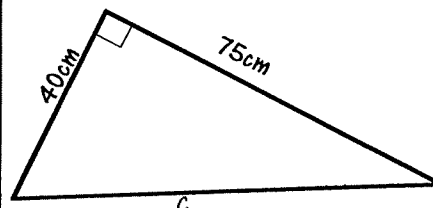
15cm



20cm



13cm

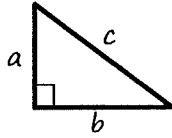


85cm

Pythagorean Theorem

Consider any right triangle where the short sides have lengths a and b and the hypotenuse has length c .

Then the Pythagorean theorem is $a^2 + b^2 = c^2$:



Example

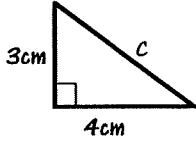
Using the theorem, you have $3^2 + 4^2 = c^2$

$$9 + 16 = c^2$$

$$25 = c^2$$

$$\sqrt{25} = c$$

$$5 = c$$



Example

Using the theorem, you have $5^2 + b^2 = 13^2$

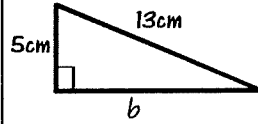
$$25 + b^2 = 169$$

$$b^2 = 169 - 25$$

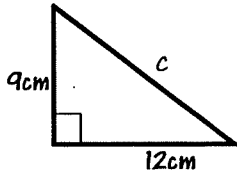
$$b^2 = 144$$

$$b = \sqrt{144}$$

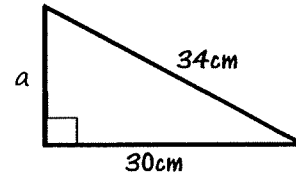
$$b = 12$$



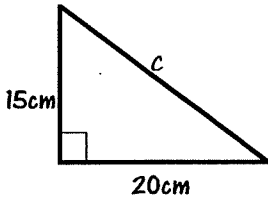
Using the Pythagorean theorem, calculate the value of the missing length. Draw an arrow to the matching answer in the middle.



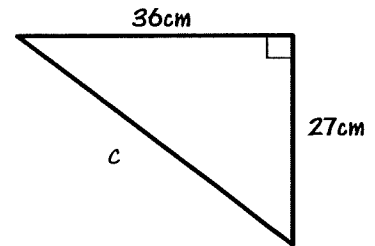
16cm



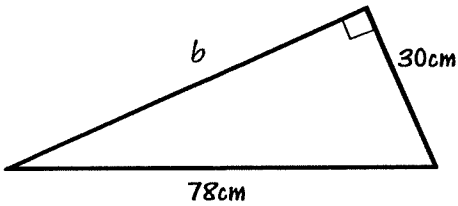
65cm



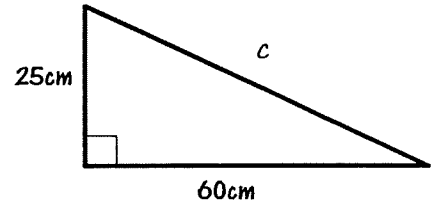
52cm



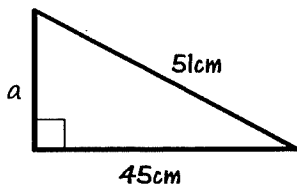
15cm



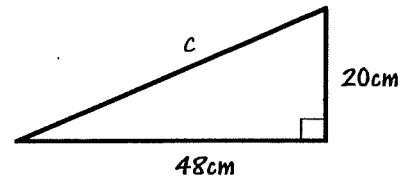
25cm



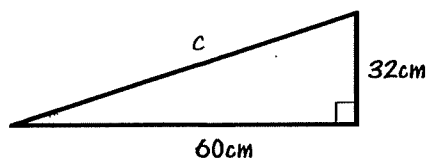
68cm



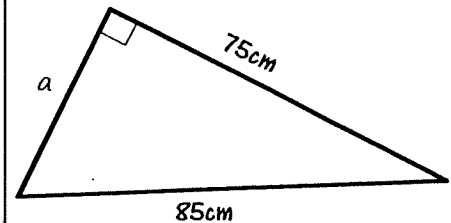
45cm



24cm



72cm



40cm