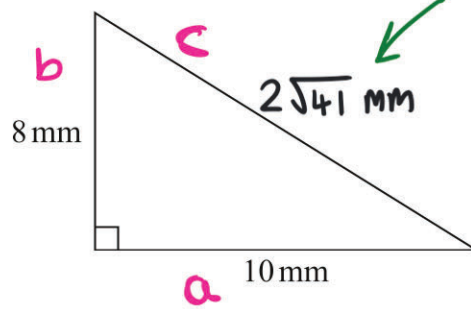




2. Here is a right-angled triangle.



Using Pythagoras Theorem

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

$$10^2 + 8^2 = c^2$$

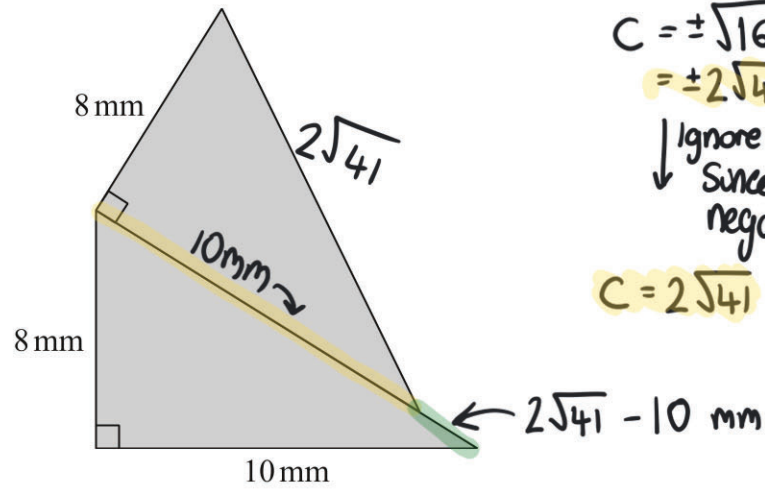
$$c^2 = 164 \quad \textcircled{1}$$

$$c = \pm \sqrt{164} \\ = \pm 2\sqrt{41}$$

Ignore negative  
Since cannot have negative length

$$c = 2\sqrt{41} \quad \textcircled{1}$$

The shaded shape below is made from two of these triangles.



Work out the perimeter of the shaded shape.

Give your answer correct to 3 significant figures.

$$\text{Perimeter} = 10 + 8 + 8 + 2\sqrt{41} + (2\sqrt{41} - 10) = 41.61249... = 41.6 \text{ mm (3sf)}$$

41.6 mm