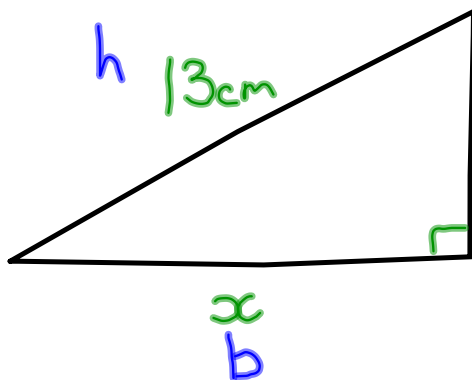


## Finding the length of a shorter side



$$a^2 + b^2 = h^2$$

$$5^2 + x^2 = 13^2$$

$$x^2 = 169 - 25$$

$$25 + x^2 = 169$$

$$x^2 = 144$$

$$x = \sqrt{144}$$

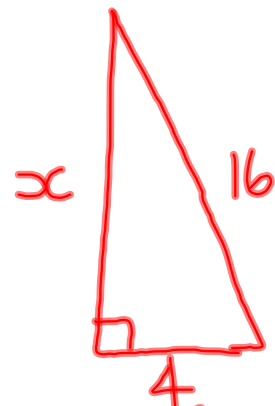
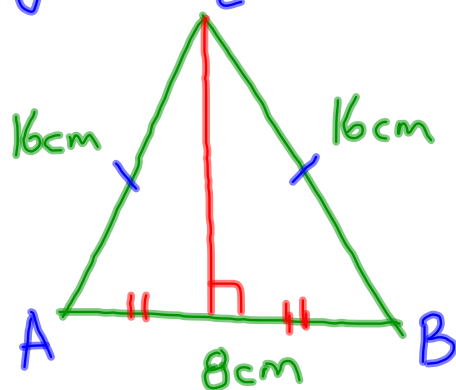
$$\underline{\underline{x = 12\text{cm}}}$$

Finding  $h$  — add

Finding a shorter side — subtract.

Example

Find the area of the isosceles triangle shown.



$$x^2 = 16^2 - 4^2$$

$$= 256 - 16$$

$$x^2 = 240$$

$$x = 15.491\dots\text{cm}$$

$$\text{Area} = \frac{1}{2} \times 8 \times 15.491\dots$$

$$= \underline{\underline{61.964 \text{ cm}^2}}$$