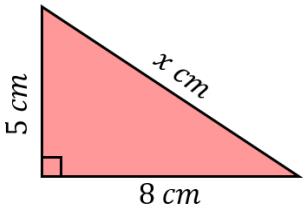
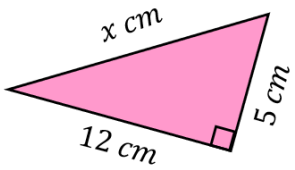
# Finding the Length of the Hypotenuse using Pythagoras' Theorem

**(a)** Find $x$ to 1 decimal place



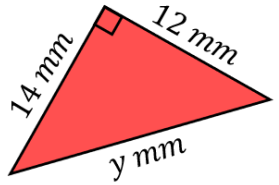

$$x^2 = 5^2 + 8^2$$
$$x^2 = 89$$
$$x = \sqrt{89}$$
$$x = 9.4\ cm\ (1\ dp)$$

**(b)** Find $x$



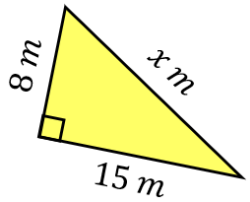

$$x^2 = 5^2 + 12^2$$

**(c)** Find $y$ to 1 decimal place

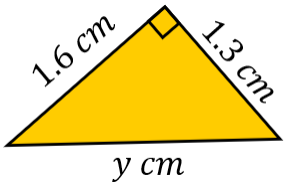



$$y^2 = 12^2 + 14^2$$

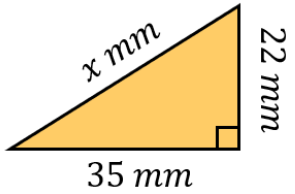
**(d)** Find $x$



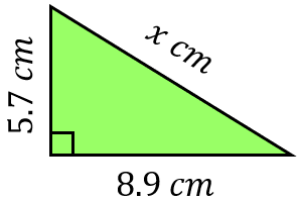

**(e)** Find $y$ to 1 decimal place



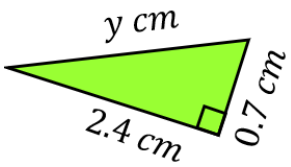

**(f)** Find $x$ to 1 decimal place



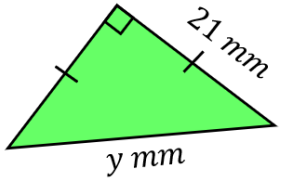

**(g)** Find $x$ to 1 decimal place



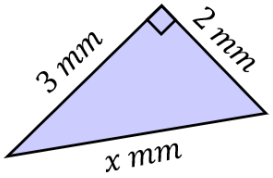

**(h)** Find $y$



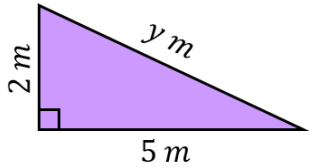

**(i)** Find $y$ to 1 decimal place




**(j)** Find $x$, leaving your answer as a surd




**(k)** Find $y$, leaving your answer as a surd




**(l)** Find $x$, leaving your answer as a surd