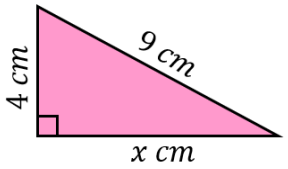
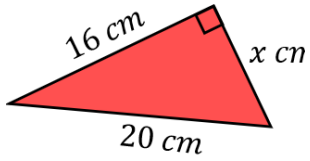
Finding the Length of a Short Side using Pythagoras' Theorem

(a) Find x to 1 decimal place



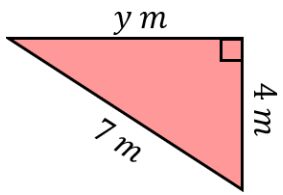
$9^2 = x^2 + 4^2$
$x^2 = 9^2 - 4^2$
$x^2 = 65$
$x = \sqrt{65}$
$x = 8.1\ cm\ (1\ dp)$

(b) Find x



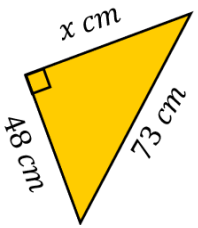
$20^2 = x^2 + 16^2$
$x^2 = 20^2 - 16^2$
$x^2 = 144$
$x = \sqrt{144}$
$x = 12\ cm$

(c) Find y to 1 decimal place



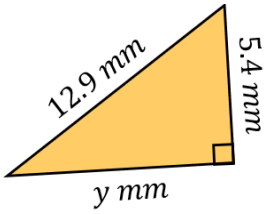
$7^2 = y^2 + 4^2$
$y^2 = 7^2 - 4^2$
$y^2 = 33$
$y = \sqrt{33}$
$y = 5.7\ m\ (1\ dp)$

(d) Find x



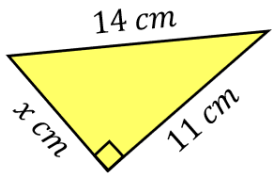
$73^2 = x^2 + 48^2$
$x^2 = 73^2 - 48^2$
$x^2 = 3025$
$x = \sqrt{3025}$
$x = 55\ cm$

(e) Find y to 1 decimal place



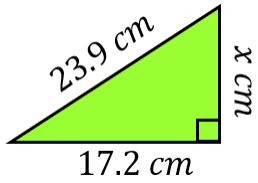
$12.9^2 = y^2 + 5.4^2$
$y^2 = 12.9^2 - 5.4^2$
$y^2 = 137.25$
$y = \sqrt{137.25}$
$y = 11.7\ mm\ (1\ dp)$

(f) Find x to 1 decimal place



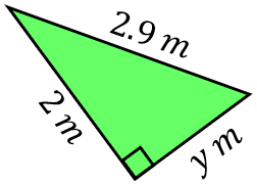
$14^2 = x^2 + 11^2$
$x^2 = 14^2 - 11^2$
$x^2 = 75$
$x = \sqrt{75}$
$x = 8.7\ cm\ (1\ dp)$

(g) Find x to 1 decimal place



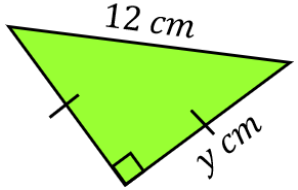
$23.9^2 = x^2 + 17.2^2$
$x^2 = 23.9^2 - 17.2^2$
$x^2 = 275.37$
$x = \sqrt{275.37}$
$x = 16.6\ cm\ (1\ dp)$

(h) Find y



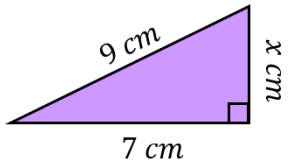
$2.9^2 = y^2 + 2^2$
$y^2 = 2.9^2 - 2^2$
$y^2 = 4.41$
$y = \sqrt{4.41}$
$y = 2.1\ m\ (1\ dp)$

(i) Find y to 1 decimal place



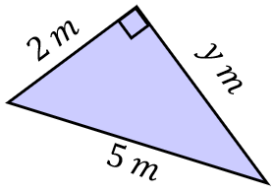
$12^2 = y^2 + y^2$
$2y^2 = 144$
$y^2 = 72$
$y = \sqrt{72}$
$y = 8.5\ cm\ (1\ dp)$

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



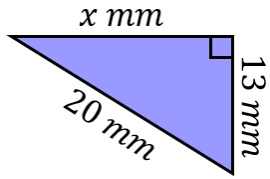
$9^2 = x^2 + 7^2$
$x^2 = 9^2 - 7^2$
$x^2 = 32$
$x = \sqrt{32}\ cm$
$or\ x = 4\sqrt{2}\ cm$

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



$5^2 = y^2 + 2^2$
$y^2 = 5^2 - 2^2$
$y^2 = 21$
$y = \sqrt{21}\ cm$

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



$20^2 = x^2 + 13^2$
$x^2 = 20^2 - 13^2$
$x^2 = 231$
$x = \sqrt{231}\ mm$