Pythagoras

Workout

Question 1:

(a) 5cm (b) 10cm (c) 13cm

Question 2:

(a) 9.43cm (b) 32.31cm (c) 9.22m

(d) 5.47cm (e) 43.05mm (f) 14.01 yards

Question 3:

(a) 1.6m/160cm (b) 59.9mm/6.0cm (c) 211.9cm/2.1m

Question 4:

(a) 5cm (b) 8cm (c) 7cm

Question 5:

(a) 6.24cm (b) 15.20cm (c) 14.39km

(d) 0.96mm (e) 94.47cm (f) 0.92 miles

Question 6:

(a) 7.21cm (b) 9.75 cm (c) 18.73cm

(d) 2.14km (e) 37.09m (f) 21.02cm

(g) 1.98cm (h) 19.67cm (i) 13.08mm

(j) 13.6cm (k) 3.38m (l) 1.35km

Question 7:

(a) No - $40^2 + 8^2 = 1664$ and $41^2 = 1681$ so it is not right-angled

(b) Yes - $52^2 + 39^2 = 4225$ and $65^2 = 4225$ so it is right-angled

(c) No - $58^2 + 28^2 = 4148$ and $65^2 = 4225$ so it is not right-angled

Apply

Question 1: 8.87m

Question 2: 7.07cm

Question 3: (a) 56cm (b) $84cm^2$

Question 4: 21.54cm

Question 5: 186.82 miles

Question 6: 47.4 cm

Question 7: (a) 8.06cm (b) 16.12cm^2

Question 8: 43.3cm^2

Question 9: 22.80cm or 11.31cm

Question 10: 12.93cm

Question 11: 12 foot and 13 foot

Question 12:

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

$12^2 + 16^2 = x^2$

$144 + 256 = x^2$

$400 = x^2$

$x^2 = 400$

$x = 200cm$

$x^2 = 400$

$x = \sqrt{400} = 20cm$

Question 13:

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

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

$10 + x^2 = 26$

$x^2 = 16$

$x = 4cm$

$5^2 = 25,\ 13^2 = 169$

$25 + x^2 = 169$

$x^2 = 144$

$x = 12CM$

Question 14:

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

$7^2 + 25^2 = x^2$

$49 + 625 = x^2$

$674 = x^2$

$x^2 = 674$

$x = 25.96cm$

not the hypotenuse

$25^2 = x^2 + 7^2$

$625 = x^2 + 49$

$x^2 = 576$

$x = 24CM$