

Question 7: (a) 8.77cm (b) 17.55cm^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:

$$\begin{aligned} a^2 + b^2 &= c^2 \\ 12^2 + 16^2 &= x^2 \\ 144 + 256 &= x^2 \\ 400 &= x^2 \\ \sqrt{} \left(\begin{array}{l} x^2 = 400 \\ x = 200\text{cm} \end{array} \right. \\ x^2 &= 400 \\ x &= \sqrt{400} = \underline{20\text{cm}} \end{aligned}$$

Question 13:

$$\begin{aligned} a^2 + b^2 &= c^2 \\ \left(\begin{array}{l} 5^2 + x^2 = 13^2 \\ 10 + x^2 = 26 \end{array} \right. & \quad \begin{array}{l} 5^2 = 25, 13^2 = 169 \\ 25 + x^2 = 169 \\ x^2 = 144 \\ x = 12\text{CM} \end{array} \\ x^2 &= 16 \\ x &= 4\text{cm} \end{aligned}$$

Question 14:

$$\begin{aligned} a^2 + b^2 &= c^2 && \text{not the hypotenuse} \\ 7^2 + 25^2 &= x^2 && \rightarrow 25^2 = x^2 + 7^2 \\ 49 + 625 &= x^2 && 625 = x^2 + 49 \\ 674 &= x^2 && x^2 = 576 \\ x^2 &= 674 && x = 24\text{CM} \\ x &= 25.96\text{cm} \end{aligned}$$