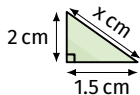


Build Tasks — Answers



Find the missing hypotenuse, labelled x .

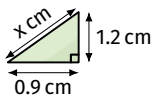
1.



Solution

$$\begin{aligned}x^2 &= 1.5^2 + 2^2 \\&= 2.25 + 4 = 6.25 \\x &= \sqrt{6.25} = 2.5\end{aligned}$$

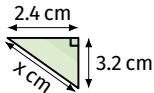
2.



Solution

$$\begin{aligned}x^2 &= 0.9^2 + 1.2^2 \\&= 0.81 + 1.44 = 2.25 \\x &= \sqrt{2.25} = 1.5\end{aligned}$$

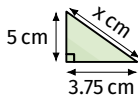
3.



Solution

$$\begin{aligned}x^2 &= 2.4^2 + 3.2^2 \\&= 5.76 + 10.24 = 16 \\x &= \sqrt{16} = 4\end{aligned}$$

4.



Solution

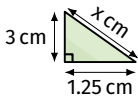
$$\begin{aligned}x^2 &= 3.75^2 + 5^2 \\&= 14.0625 + 25 = \\&\quad 39.0625 \\x &= \sqrt{39.0625} = 6.25\end{aligned}$$

Build Tasks – Answers



Find the missing hypotenuse, labelled x .

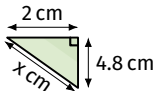
5.



Solution

$$\begin{aligned}x^2 &= 1.25^2 + 3^2 \\&= 1.5625 + 9 = \\&10.5625 \\x &= \sqrt{10.5625} = 3.25\end{aligned}$$

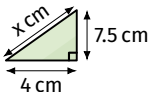
6.



Solution

$$\begin{aligned}x^2 &= 2^2 + 4.8^2 \\&= 4 + 23.04 = 27.04 \\x &= \sqrt{27.04} = 5.2\end{aligned}$$

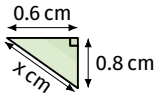
7.



Solution

$$\begin{aligned}x^2 &= 4^2 + 7.5^2 \\&= 16 + 56.25 = 72.25 \\x &= \sqrt{72.25} = 8.5\end{aligned}$$

8.



Solution

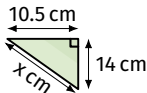
$$\begin{aligned}x^2 &= 0.6^2 + 0.8^2 \\&= 0.36 + 0.64 = 1 \\x &= \sqrt{1} = 1.0\end{aligned}$$

Build Tasks — Answers



Find the missing hypotenuse, labelled x .

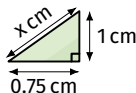
9.



Solution

$$\begin{aligned}x^2 &= 10.5^2 + 14^2 \\&= 110.25 + 196 = \\&306.25 \\x &= \sqrt{306.25} = 17.5\end{aligned}$$

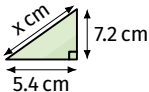
10.



Solution

$$\begin{aligned}x^2 &= 0.75^2 + 1^2 \\&= 0.5625 + 1 = 1.5625 \\x &= \sqrt{1.5625} = 1.25\end{aligned}$$

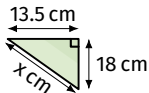
11.



Solution

$$\begin{aligned}x^2 &= 5.4^2 + 7.2^2 \\&= 29.16 + 51.84 = 81 \\x &= \sqrt{81} = 9\end{aligned}$$

12.



Solution

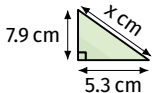
$$\begin{aligned}x^2 &= 13.5^2 + 18^2 \\&= 182.25 + 324 = \\&506.25 \\x &= \sqrt{506.25} = 22.5\end{aligned}$$

Build Tasks — Answers



These triangles are not perfect Pythagorean triples. Round each answer to 1 decimal place.

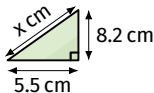
13.



Solution

$$\begin{aligned}x^2 &= 5.3^2 + 7.9^2 \\&= 28.09 + 62.41 \\&= 90.5, x \approx 9.5\end{aligned}$$

14.



Solution

$$\begin{aligned}x^2 &= 5.5^2 + 8.2^2 \\&= 30.25 + 67.24 \\&= 97.49, x \approx 9.9\end{aligned}$$

15. A support cable is fixed to the ground $4\frac{1}{2}$ m from the base of a pole and reaches a point 6 m up the pole. Find the length of the cable, in metres.

Solution

$$\text{cable} = \sqrt{4.5^2 + 6^2} = \sqrt{56.25} = 7.5 \text{ m}$$

16. A ladder's foot is $2\frac{1}{2}$ m from a wall. It reaches 6 m up the wall. Find the length of the ladder, in metres.

Solution

$$\text{ladder} = \sqrt{2.5^2 + 6^2} = \sqrt{42.25} = 6.5 \text{ m}$$