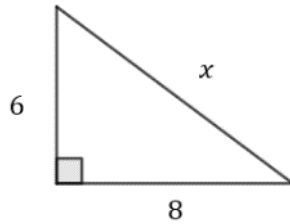
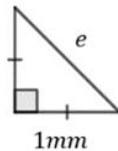
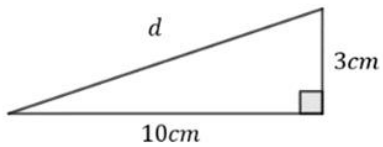
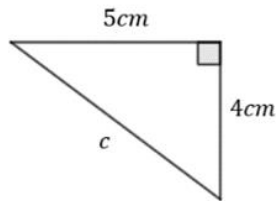
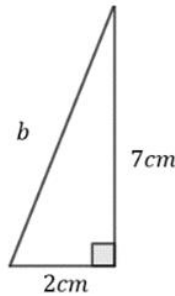
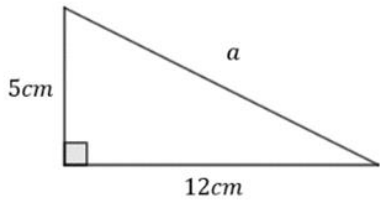


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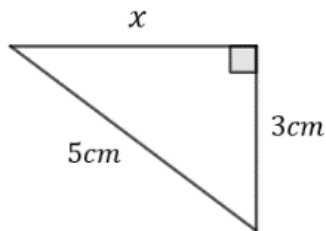
(1) Use Pythagoras Theorem to show that $x = 10$ in the triangle shown below.



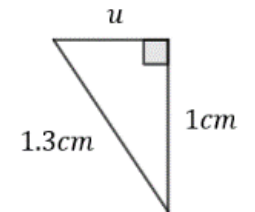
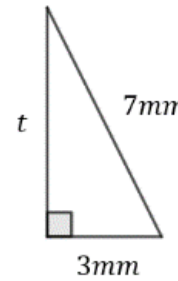
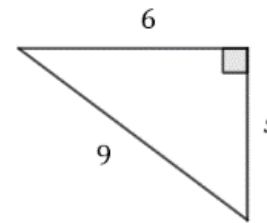
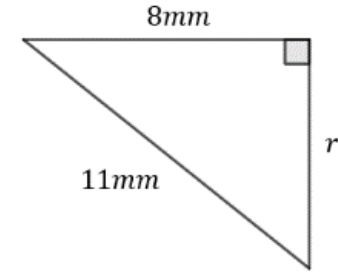
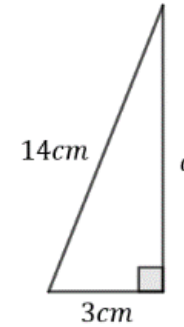
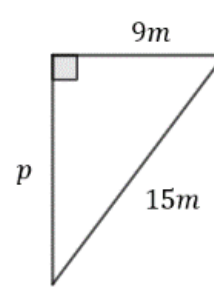
(2) Find the value of each missing letter in the triangles below. Give any non-integer answers to 1dp.



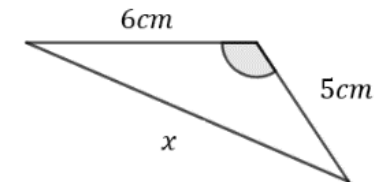
(3) Use Pythagoras Theorem to show that $x = 4cm$ in the triangle shown below.



(4) Find the value of each missing letter in the triangles below. Give any non-integer answers to 3SF.



(5) Fred wants to find the value of x in the triangle below.



He uses Pythagoras Theorem and writes:

$$x^2 = 6^2 + 5^2$$

$$x^2 = 61$$

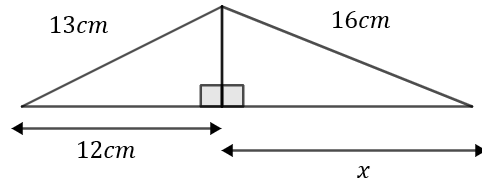
$$x = 7.61$$

What error has he made in his approach to finding x ?

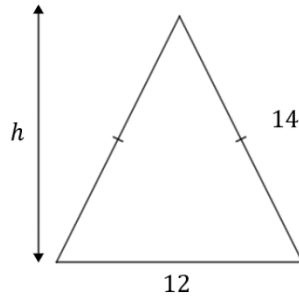
(6) In $\triangle ABC$, $\angle BAC = 90^\circ$, $AC = 7cm$ and $BC = 13cm$. Find the length of AB to one decimal place.

(7) In $\triangle PQR$, $\angle PQR = 90^\circ$, $PQ = RQ = 6cm$. Find the perimeter of $\triangle PQR$ giving your answer to 3SF.

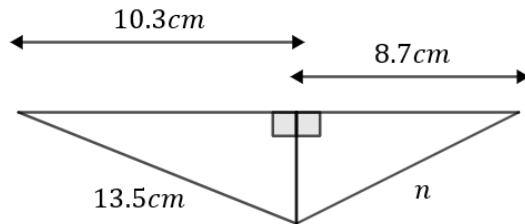
(8) Show that the value of x in the triangle below is 15.2cm correct to 1dp.



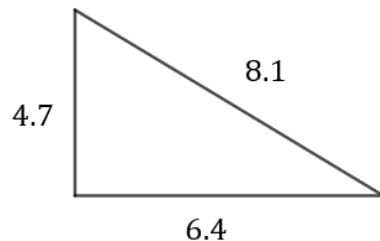
(9) Use Pythagoras Theorem to show that the height (h) of the triangle below is 12.6 correct to 3 SF.



(10) Find the value of n to 3SF.

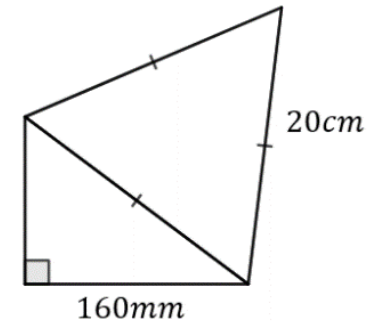


(11) Prove that the triangle below is not a right-angle triangle.



(12) Rectangle $ABCD$ is such that $AB = 9\text{cm}$ and $AD = 10\text{cm}$. Find the length of the line AC .

(13) A wire structure is made of 5 pieces of individual wire as shown below.

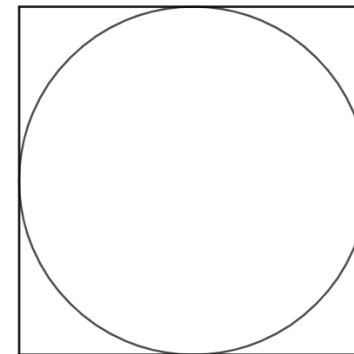


Find the total length of the wire used giving your answer in metres.

(14) Fred goes for a walk. He walks 840m due west from his house before walking 1.32km due south. He then walks directly home. Find the total distance he travels.

(15) On an analogue clock the hands of the clock measure 12.2cm and 7.9cm . Find the distance between the tips of the hand at 9am.

(16) The diagram below shows the square $ABCD$ with a circle inscribed inside. The circle touches all four sides of the square.



Given that the length $AC = AD = 8\sqrt{2}$, show that the area of the circle is 16π