Question 1: Find the size of the missing angles in the triangles below.

(a) 
\[ \triangle \text{with sides } 3\text{cm, 6cm, } x\text{cm} \]

(b) 
\[ \triangle \text{with sides } 15\text{cm, 4cm, } x\text{cm} \]

(c) 
\[ \triangle \text{with sides } 10\text{cm, 8cm, } x\text{cm} \]

(d) 
\[ \triangle \text{with sides } 9\text{cm, 12cm, } x\text{cm} \]

(e) 
\[ \triangle \text{with sides } 20\text{cm, 7cm, } x\text{cm} \]

(f) 
\[ \triangle \text{with sides } 42\text{cm, 48cm, } x\text{cm} \]

(g) 
\[ \triangle \text{with sides } 2.8\text{cm, 2.5cm, } x\text{cm} \]

(h) 
\[ \triangle \text{with sides } 11\text{cm, 15cm, } x\text{cm} \]

(i) 
\[ \triangle \text{with sides } 90\text{cm, 1.2m, } x\text{cm} \]

(j) 
\[ \triangle \text{with sides } 9\text{cm, 7.4cm, } x\text{cm} \]

(k) 
\[ \triangle \text{with sides } 5\text{km, 12km, } x\text{km} \]

(l) 
\[ \triangle \text{with sides } 25\text{cm, 20cm, } x\text{cm} \]
Question 2: Find the lengths of the sides labelled $x$ below.

(a) 

(b) 

(c) 

(d) 

(e) 

(f) 

(g) 

(h) 

(i) 

(j) 

(k) 

(l) 

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Question 3: Find the size of the missing angles/sides labelled x below.

(a) 

(b) 

(c) 

(d) 

(e) 

(f) 

In each question, draw a diagram unless it has been given.

Question 1: A 4 metre long ladder is placed against a wall. The angle between the ladder and the ground is 75°. How far up the wall does the ladder reach?

Question 2: A 5 metre long ladder is placed against a wall. It reaches 4.3 metres up the wall. What is the angle between the ladder and the ground?

Question 3: A ladder is placed against a wall. The base of the ladder is 4 foot from the bottom of the wall. The angle between the ladder and the ground is 80°. What is the length of the ladder?

Question 4: A rectangle is 12cm long and 5cm wide. Find the size of the angle marked x.

Question 5: (a) Find the length of AC.
(b) Find the length of AB.
(c) Find the perimeter of triangle ABC.
(d) Find the area of triangle ABC.
Question 6: A helicopter leaves A and flies 40 miles due east. Then the helicopter flies 10 miles due south and arrives at B. Work out the bearing of B from A.

Question 7: A boat leaves a port and sails 55km due west and then 30km due north and arrives at an oil rig. What is the bearing of the oil rig from the port?

Question 8: Shown is an isosceles triangle. Calculate its area.

Question 9: Shown is a rhombus of side length 10cm. Calculate its area.

Question 10: Can you spot any mistakes in the question below?

Find the size of the angle x.

Find the size of the angle x.

\[ \sin x = \frac{9}{10} \]
\[ \sin x = 0.9 \]
\[ x = \sin^{-1} 0.9 \]
\[ x = 0.916^\circ \]