

Non-Calculator

Q1.

- (a) Circle the value of $\cos 60^\circ$

$$\frac{1}{\sqrt{3}}$$

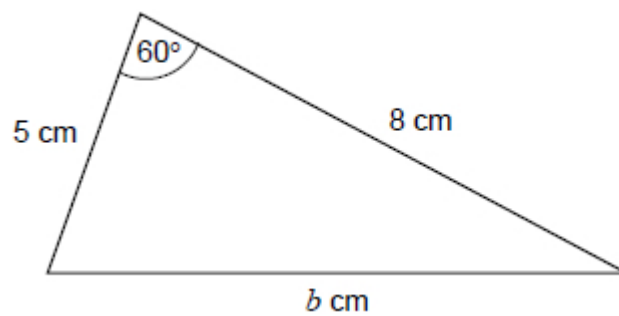
$$\sqrt{3}$$

$$\frac{1}{2}$$

$$\frac{\sqrt{3}}{2}$$

(1)

- (b)



Not drawn accurately

Show that $b = 7$

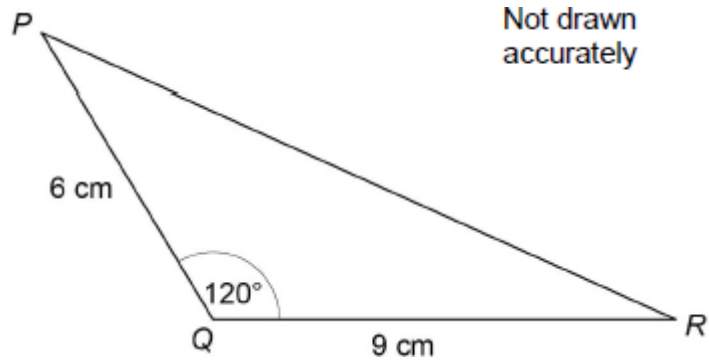
(3)

(Total 4 marks)

Calculator

Q2.

Here is a triangle.

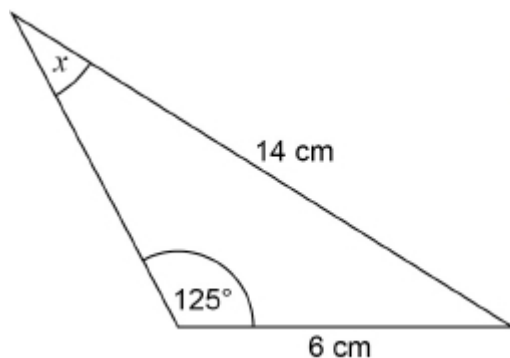


Work out the length PR .

Answer _____ cm
(Total 3 marks)

Q3.

Work out the size of angle x .



Not drawn accurately

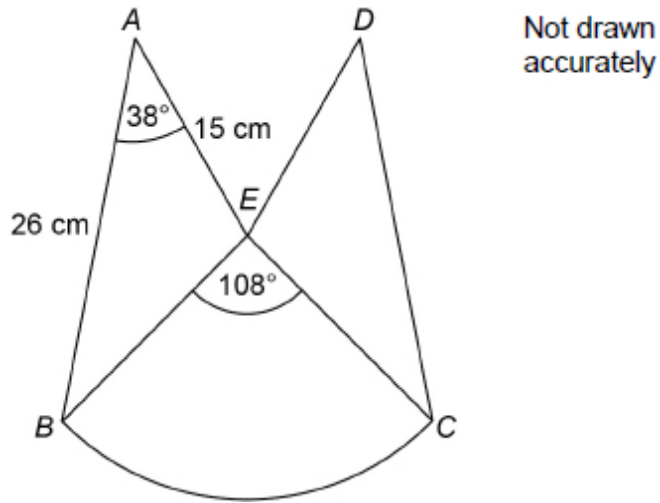
Answer _____ degrees
(Total 3 marks)

Q4.

The diagram shows a logo.

ABE and DCE are congruent triangles.

BCE is a sector of a circle, centre E .



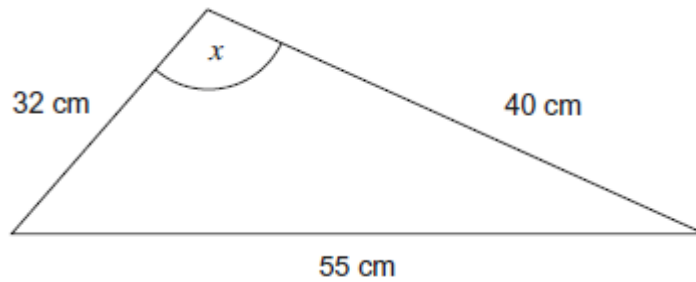
Show that the area of the logo is 510 cm^2 to 2 significant figures.

(Total 5 marks)

Q5.

Work out the size of angle x .

Not drawn accurately

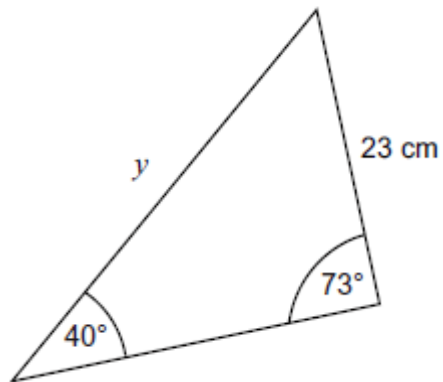


Answer _____ degrees
(Total 3 marks)

Q6.

Work out length y .

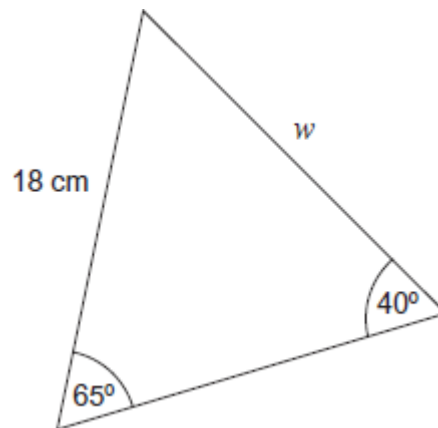
Not drawn accurately



Answer _____ cm
(Total 3 marks)

Q7.

Not drawn accurately



Work out the length w .

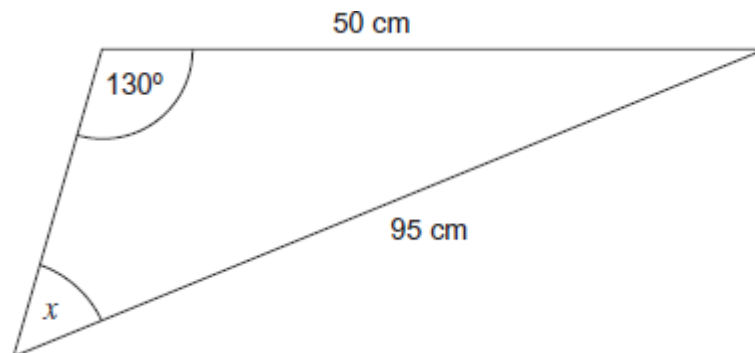
Answer _____ cm

(Total 3 marks)

Q8.

(a) Work out the size of angle x .

Not drawn accurately

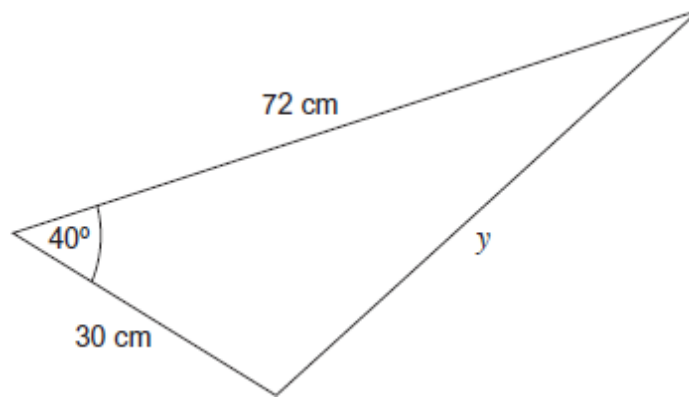


Answer _____ degrees

(3)

(b) Work out the length y .

Not drawn accurately



Answer _____ cm

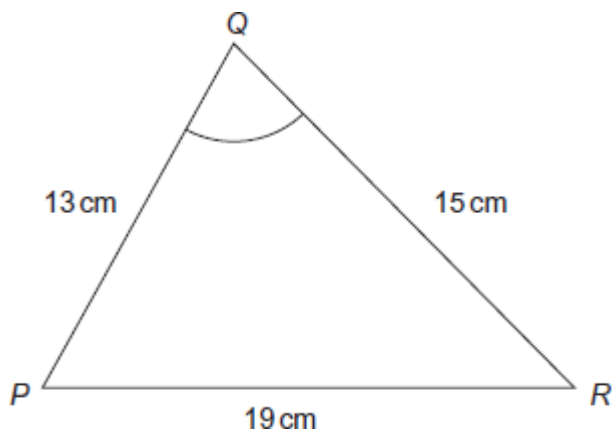
(3)

(Total 6 marks)

Q9.

Work out the size of angle PQR .

Not drawn accurately

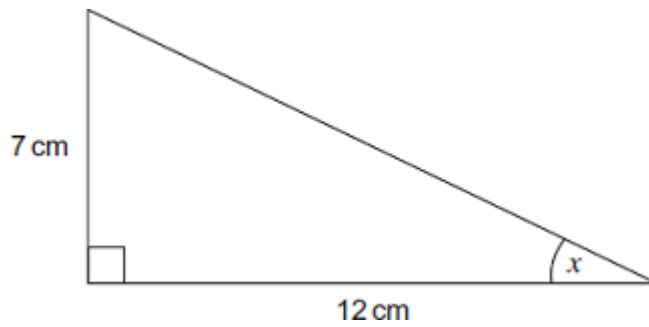


Answer _____ degrees
(Total 3 marks)

Q10.

(a) Work out the size of angle x .

Not drawn accurately

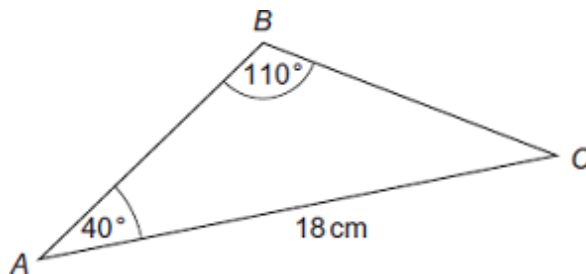


Answer _____ degrees

(3)

(b) Work out the length BC .

Not drawn accurately



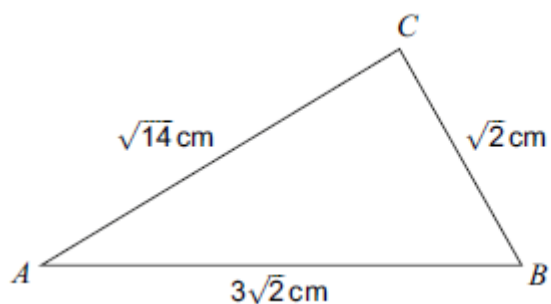
Answer _____ cm

(3)

(Total 6 marks)

Q11.

(a) Here is triangle ABC



Not drawn accurately

Show that angle $B = 60^\circ$

(3)

(b) Hence work out the area of triangle ABC

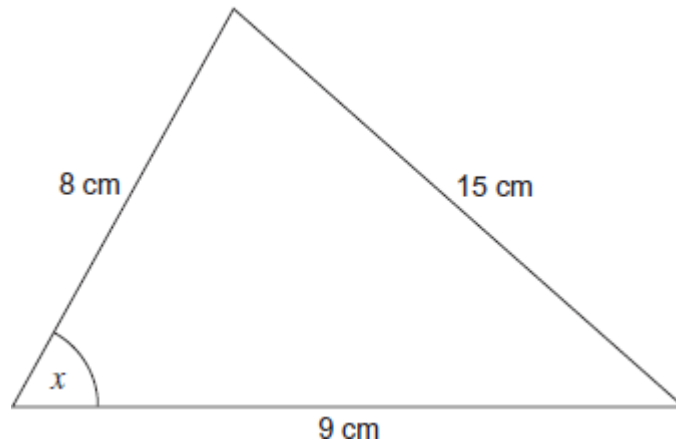
Answer _____ cm^2

(3)

(Total 6 marks)

Q12.

Not drawn accurately



- (a) Which equation is correct for the triangle?
Circle your answer.

$$\cos x = \frac{15^2 - 8^2 - 9^2}{2 \times 8 \times 9}$$

$$\cos x = \frac{8^2 + 9^2 - 15^2}{15 \times 8 \times 9}$$

$$\cos x = \frac{8^2 + 9^2 - 15^2}{2 \times 8 \times 9}$$

$$\cos x = \frac{15^2 - 8^2 + 9^2}{15 \times 8 \times 9}$$

(1)

- (b) Use your calculator to work out the value of x in your equation.

Answer _____ degrees

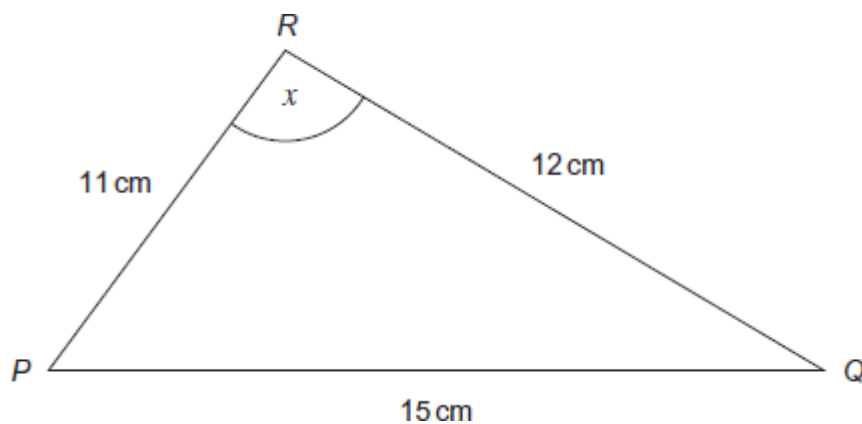
(1)

(Total 2 marks)

Q13.

(a)

Not drawn accurately



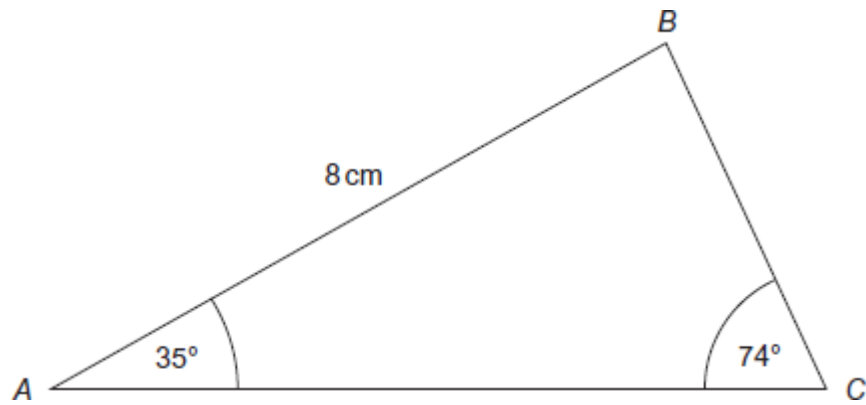
Use the cosine rule to work out the size of angle x .

Answer _____ degrees

(3)

(b)

Not drawn accurately



Use the sine rule to work out the length BC .

Answer _____ cm

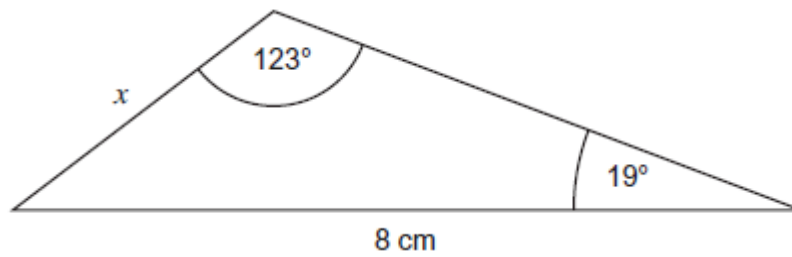
(3)

(Total 6 marks)

Q14.

(a) Work out the length x .

Not drawn accurately



Answer _____ cm

(3)

(b) Circle the statements that are true.

$\sin 123^\circ = \sin 57^\circ$

$\sin 123^\circ = \cos 57^\circ$

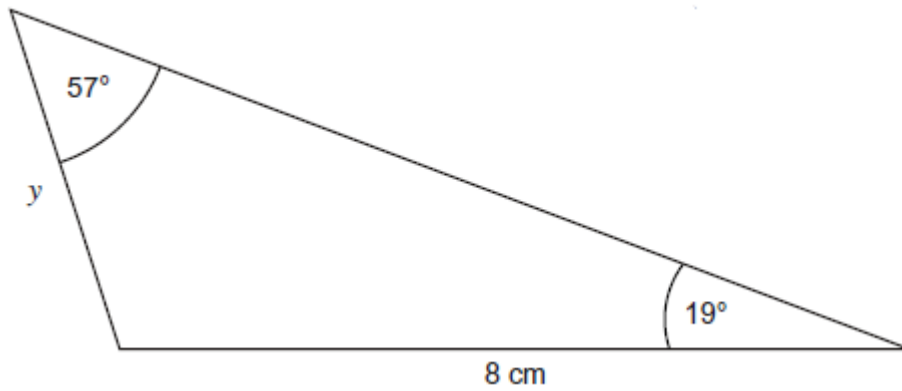
$\cos 123^\circ = \cos 57^\circ$

$\cos 123^\circ = -\cos 57^\circ$

(2)

(c) Work out the length y .

Not drawn accurately



Answer _____ cm

(1)

(Total 6 marks)