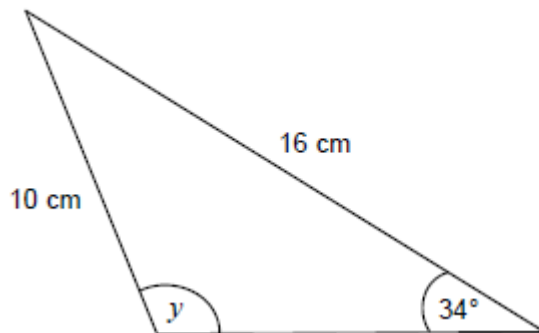


**Q1.**

In the triangle, angle  $y$  is obtuse.

Not drawn accurately



Work out the size of angle  $y$

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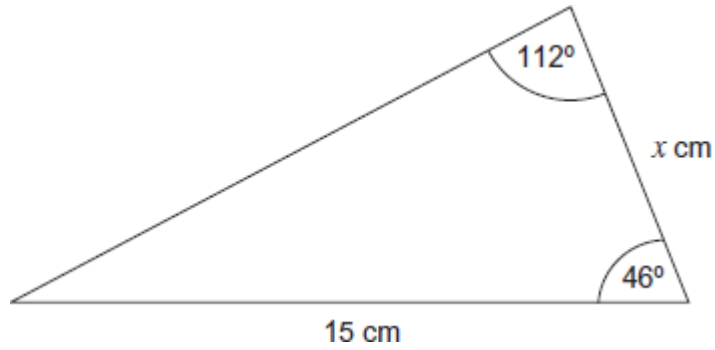
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Answer ..... degrees

**(Total 3 marks)**

**Q2.**

Not drawn accurately



Work out the value of  $x$ .

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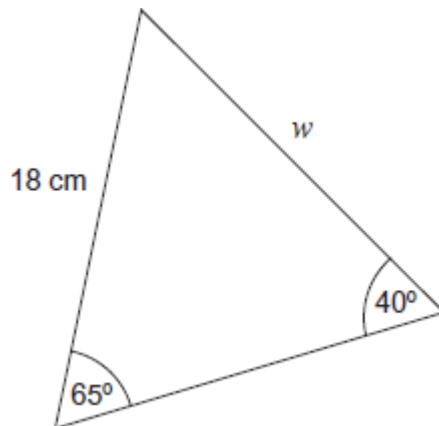
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Answer .....

(Total 4 marks)

**Q3.**

Not drawn accurately



Work out the length  $w$ .

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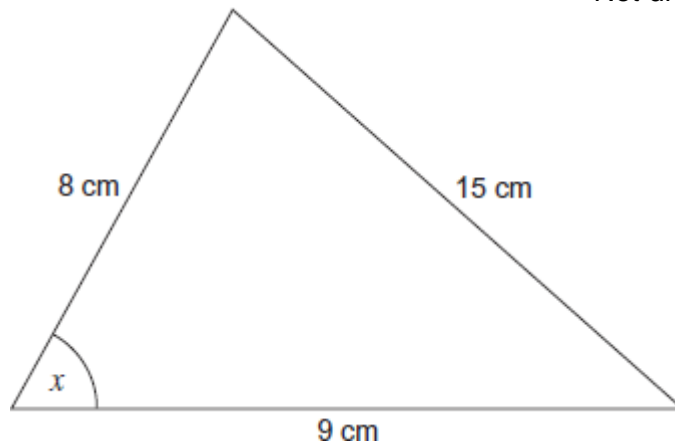
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Answer ..... cm

(Total 3 marks)

Q4.

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.

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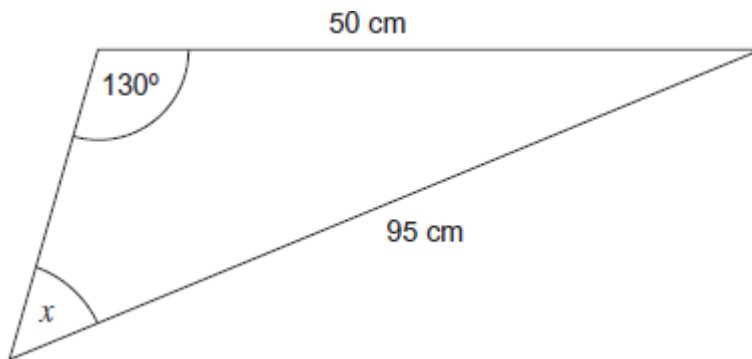
Answer ..... degrees

(1)  
(Total 2 marks)

**Q5.**

(a) Work out the size of angle  $x$ .

Not drawn accurately



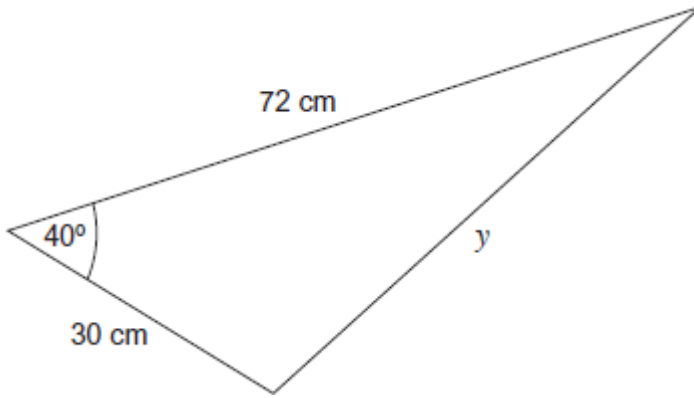
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Answer ..... degrees

(3)

(b) Work out the length  $y$ .

Not drawn accurately



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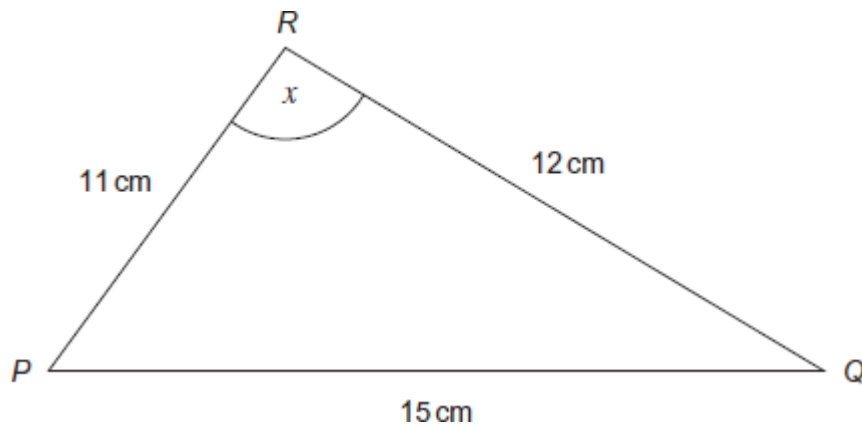
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Answer ..... cm

(3)  
(Total 6 marks)

Q6.(a)

Not drawn accurately



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

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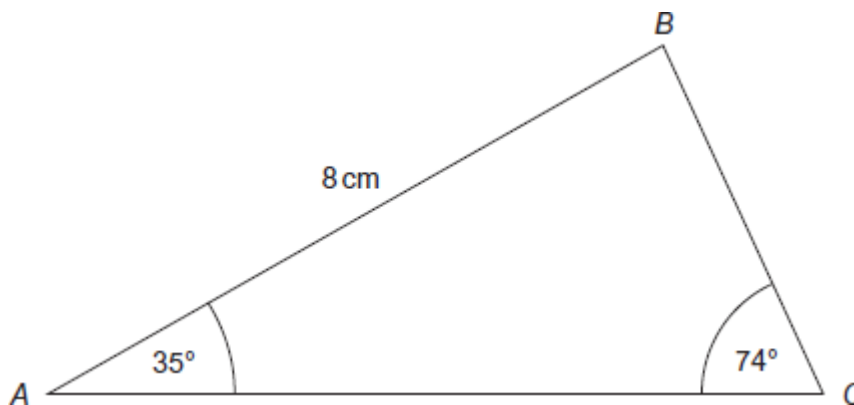
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Answer ..... degrees

(3)

(b)

Not drawn accurately



Use the sine rule to work out the length  $BC$ .

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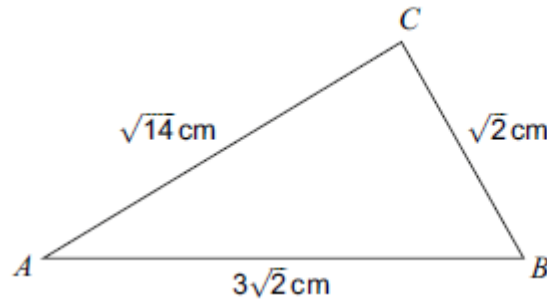
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Answer ..... cm

(3)  
 (Total 6 marks)

**Q7.**

(a) Here is triangle  $ABC$



Not drawn accurately

Show that angle  $B = 60^\circ$

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(3)

(b) Hence work out the area of triangle  $ABC$

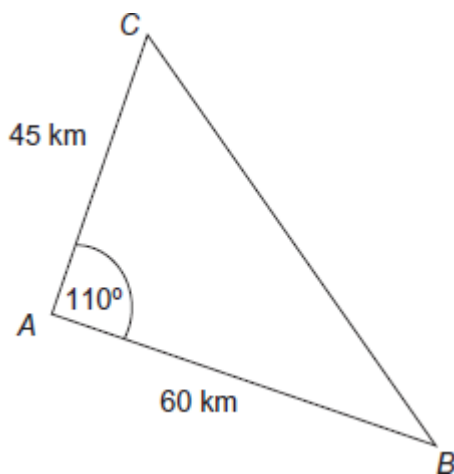
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Answer ..... cm<sup>2</sup>

(3)  
(Total 6 marks)

Q8.

Not drawn accurately



Work out the length *BC*.

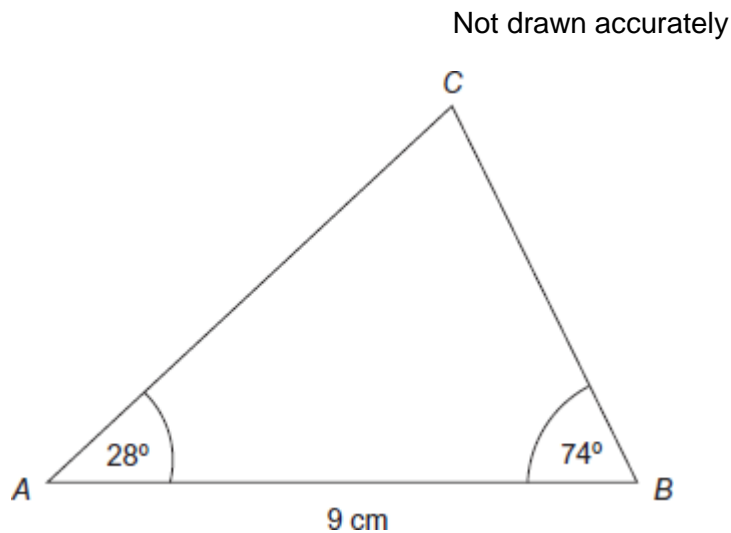
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Answer ..... km

(Total 3 marks)

Q9.





Work out the length of  $BC$ .

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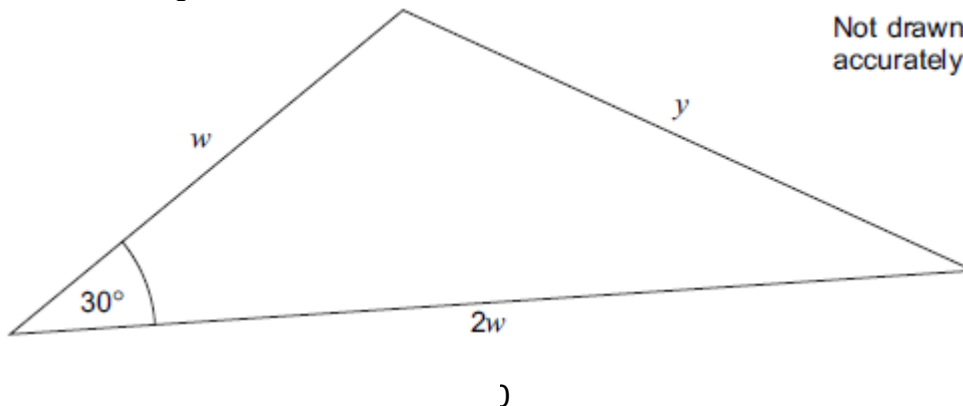
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Answer ..... cm

(Total 4 marks)

**Q10.**

The area of this triangle is  $18\text{cm}^2$



Work out  $y$ .

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$y = \dots\dots\dots$  cm

**(Total 5 marks)**

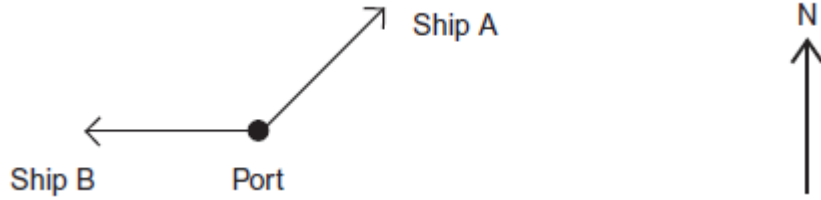
**Q11.** You are given that 1 knot = 1 nautical mile per hour.

Two ships leave a port at the same time.

- Ship A sails at 10 knots on a bearing of  $035^\circ$
- Ship B sails at 15 knots on a bearing of  $270^\circ$

Calculate the distance between the ships after **2 hours**.  
Do **not** use a scale drawing.

Not drawn accurately



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Answer ..... nautical miles

**(Total 5 marks)**