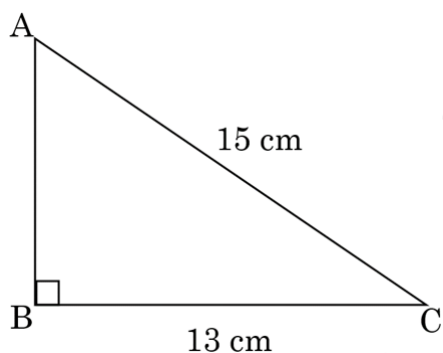




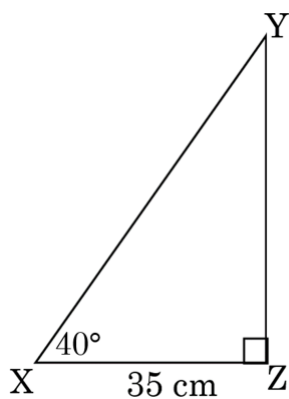
## Trigonometry Exam Practice

Q1. Find the size of angle ACB to 1 decimal place.



Answer: \_\_\_\_\_  
(3 marks)

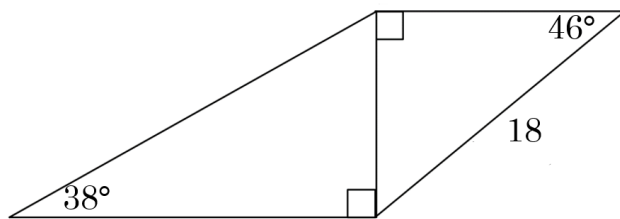
Q2. Find the length of side XY to 1 decimal place.



Answer: \_\_\_\_\_  
(3 marks)

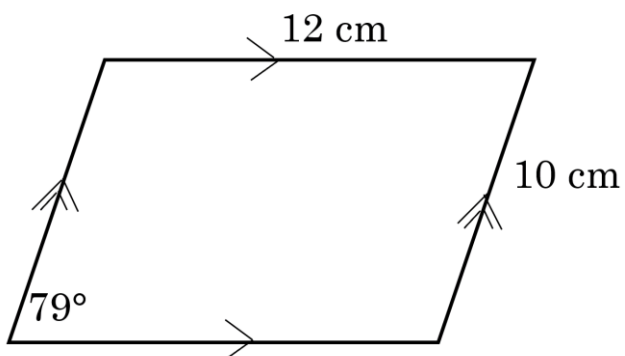


Q3. Find the perimeter of the shape below correct to 2 decimal places.



Answer: \_\_\_\_\_  
(4 marks)

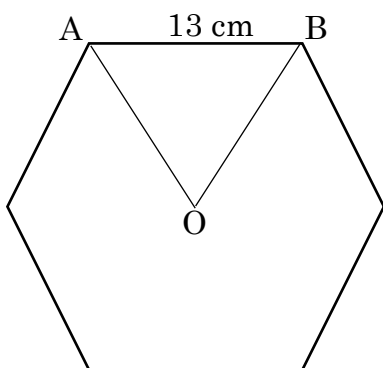
Q4. Find the area of the shape below correct to 1 decimal place.



Answer: \_\_\_\_\_  
(4 marks)

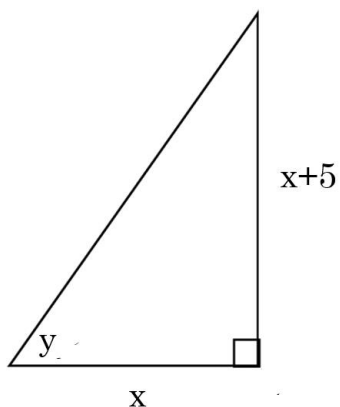


Q5. Below, O is the centre of the regular hexagon shown. Find the area of the hexagon to the nearest square cm.



Answer: \_\_\_\_\_  
(4 marks)

Q6. The area of the triangle below is  $18 \text{ cm}^2$ . Find the size of angle  $y$  to 1 decimal place.

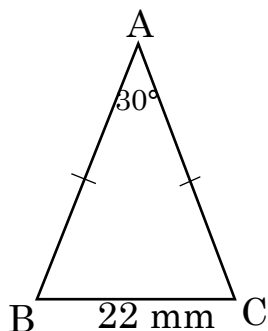


Answer: \_\_\_\_\_  
(5 marks)



### Problem Questions:

Q7. A design for the face of a watch consists of a number of metal strips bent into the shape of triangles as shown below:



The triangles are arranged in a circular pattern so that each vertex A meets at a point. Sufficient triangles are used so there is no gap left.

Estimate the total length of the metal used to 1 decimal place. Why is the model unrealistic?

Answer: \_\_\_\_\_

(5 marks)



Q8. A man walks due north along a straight road. When he reaches a point P on this road, he can see a tower T on a bearing of  $30^\circ$  from himself. He continues a further 225 m from point P to the point Q, at which point the tower now lies on a bearing of  $60^\circ$  from his position.

(i) Find the shortest distance of T from the road to 1 decimal place.

Answer: \_\_\_\_\_  
(3 marks)

(ii) The man walks further north to a point R, so that the distance RT is 210 m. Determine the two possible values for the distance PR, correct to the nearest metre.

Answer: \_\_\_\_\_  
(3 marks)



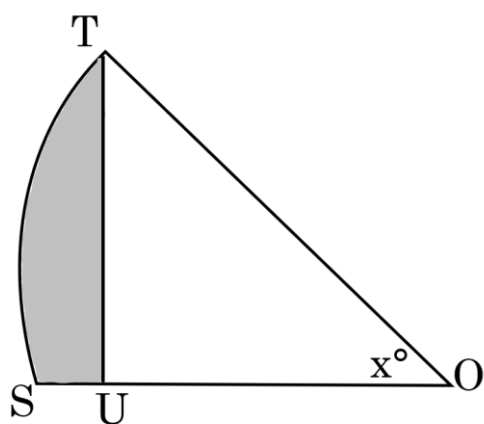
Q9. Below, OST is a sector of a circle. In the triangle:

$$OU = 2x + 2,$$

$$TU = 2x - 1 \text{ and}$$

$$OT = 3x$$

Find the shaded area correct to 1 decimal place.

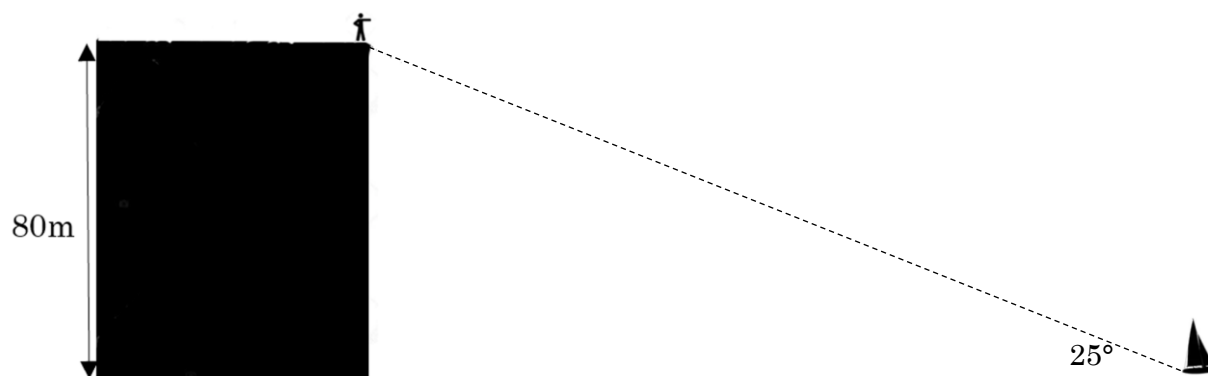


Answer: \_\_\_\_\_

(6 marks)



Q10. A boat is heading directly for the foot of a vertical cliff at 2.2 m/s. At 11.59am, the position of the boat from the cliff is shown in the diagram:



Rob is standing on top of a cliff, and he will be seen by his friend Tom in the boat once the angle of depression from Rob to Tom is  $75^\circ$ . Estimate what time, to the nearest second, will Rob be seen by Tom.

Answer: \_\_\_\_\_  
(4 marks)

State two reasons why your answer is only an estimate.

Answer: \_\_\_\_\_  
(2 marks)



Q11. Phil is in the grounds of a local church. A friend tells him that the angle of elevation,  $\theta$ , from his current position to the top of the church tower is such that  $\tan(\theta)$  is  $\frac{21}{5}$ .  
Phil says, “that means the height of the church tower is 21 m”.  
Do you agree? Explain your choice.

Answer: \_\_\_\_\_  
(2 marks)