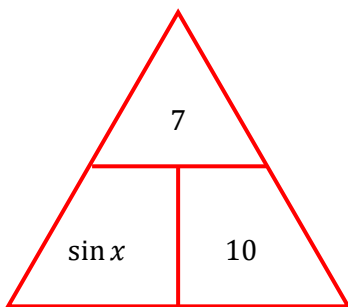
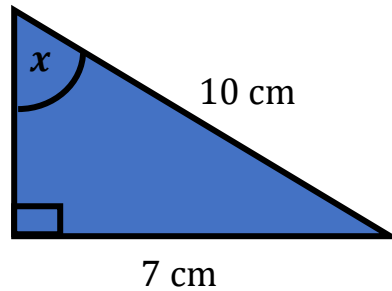


Trigonometry

1. Calculate the size of angle x .

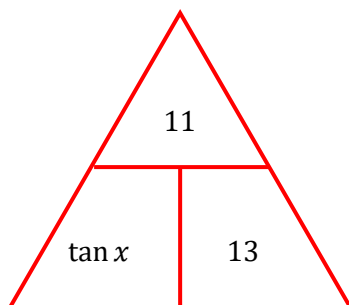
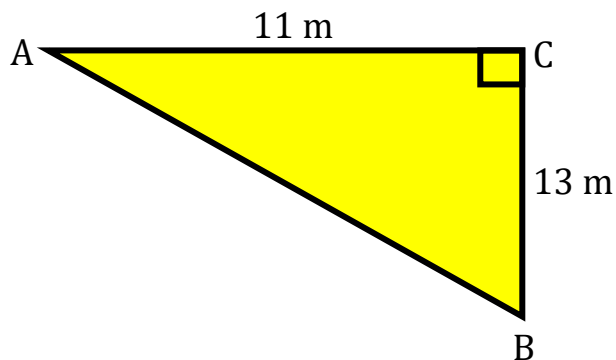


$$x = \sin^{-1}\left(\frac{7}{10}\right)$$

$$x = 44.4^\circ$$

(3 marks)

2. Calculate the angle ABC.



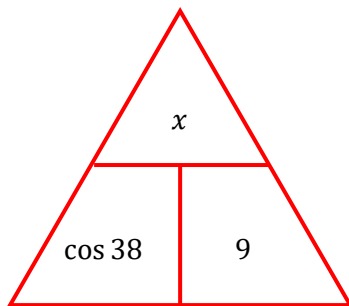
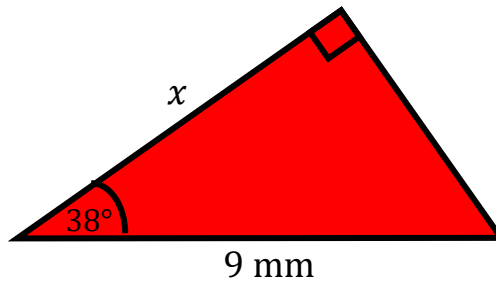
$$x = \tan^{-1}\left(\frac{7}{10}\right)$$

$$x = 40.2^\circ$$

(3 marks)

Trigonometry

3. Work out the length of x .

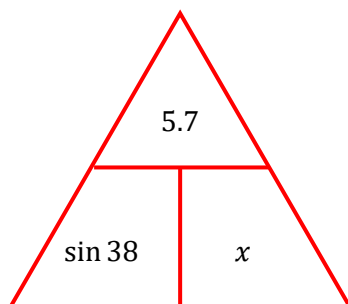
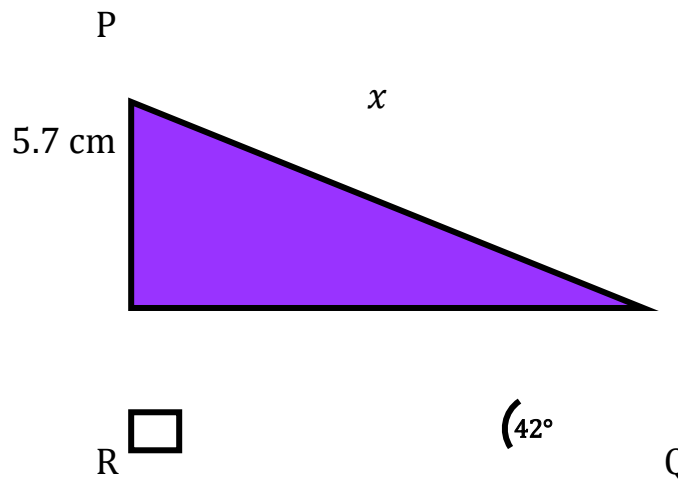


$$x = \cos(38) \times 9$$

$$x = 7.09 \text{ mm}$$

(3 marks)

4. Work out the length of PQ.



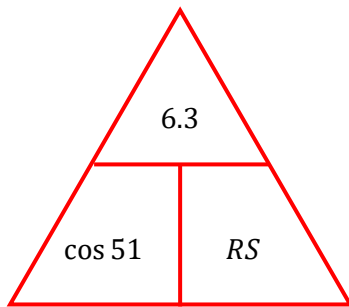
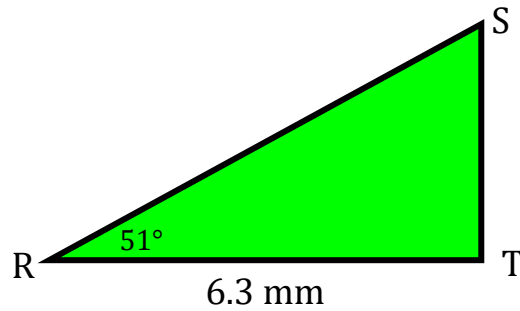
$$x = 5.7 \div \sin(42)$$

$$x = 9.26 \text{ cm}$$

Trigonometry

(3 marks)

5. Work out the length of RS.

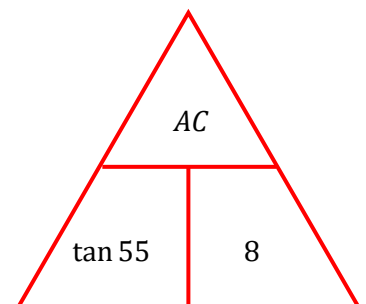
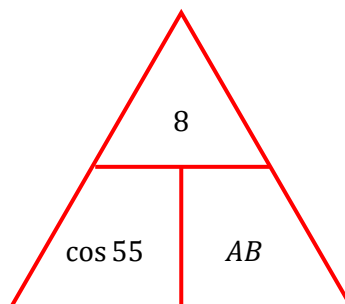
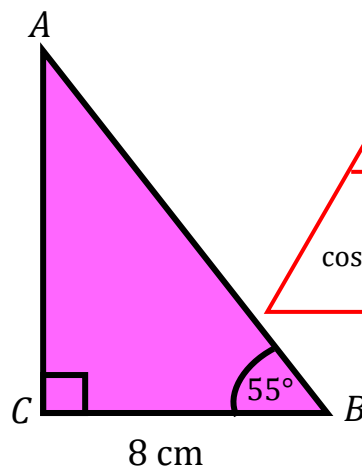


$$RS = 6.3 \div \cos(51)$$

$$x = 10.01 \text{ mm}$$

(3 marks)

6. Work out the perimeter of ABC.



$$AB = 13.95$$

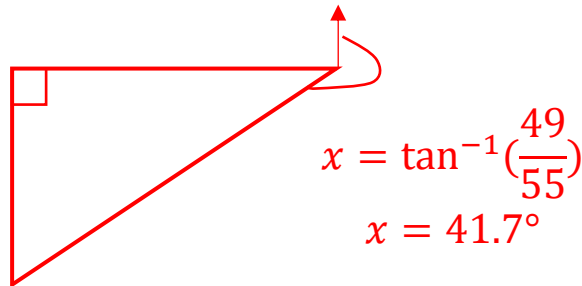
$$AC = 11.43 \text{ cm}$$

$$\text{Perimeter: } 33.38 \text{ cm}$$

Trigonometry

(4 marks)

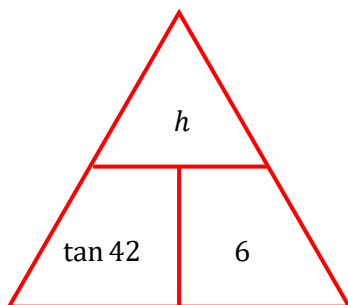
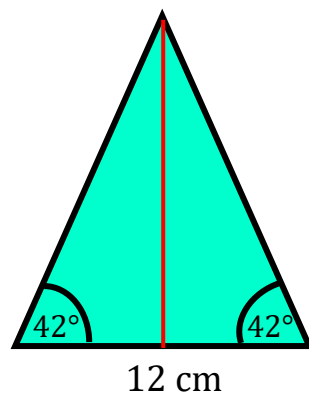
7. A helicopter leaves town A and flies West 55 km. Then the helicopter flies 49 km south to town B. Work out the bearing of B from A.



Bearing of B from A: $360 - 90 - 41.7 = 228^\circ$

(5 marks)

8. Calculate the area of the isosceles triangle.



$$h = 6 \times \tan(42)$$

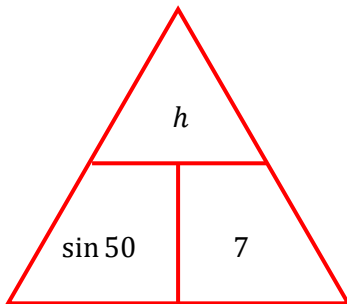
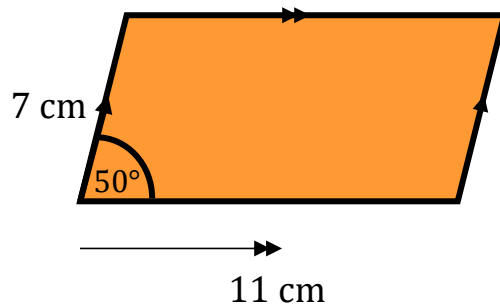
$$h = 5.4 \text{ cm}$$

$$\text{Area: } \frac{5.4 \times 12}{2} = 32.4 \text{ cm}^2$$

Trigonometry

(4 marks)

9. Here is a parallelogram.
Find the area of the parallelogram.



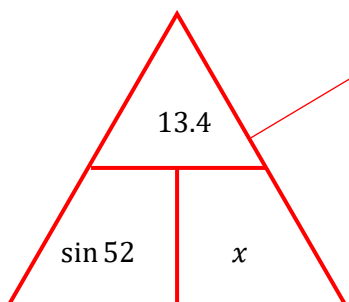
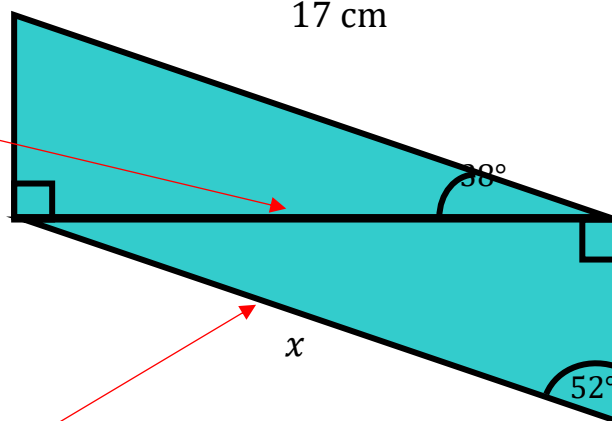
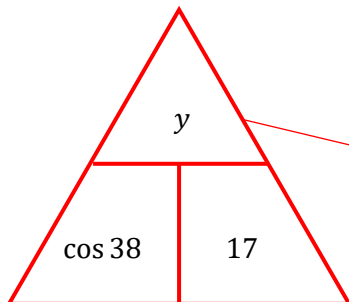
$$h = 7 \times \sin(50)$$

$$h = 5.36 \text{ cm}$$

$$\text{Area: } 11 \times 5.36 = 59 \text{ cm}^2$$

(4 marks)

10. Two right angled triangles are shown below.
Find the length of x .



$$y = 17 \times \cos(38)$$

$$y = 13.396 \dots \text{ cm}$$

$$x = 13.4 \div \sin(52)$$

Trigonometry

$$x = 17 \text{ cm}$$

(3 marks)