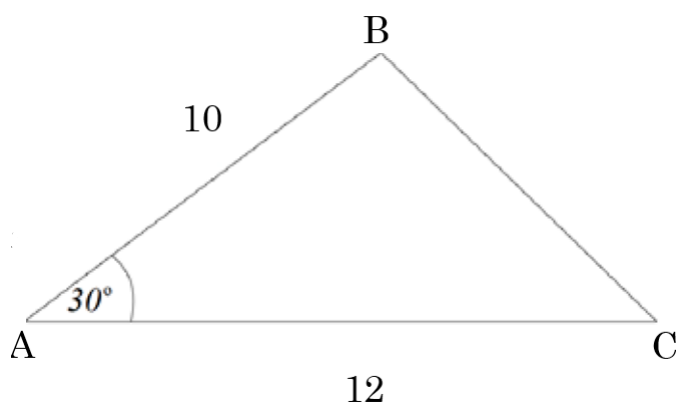




## The Cosine Rule Exam Practice

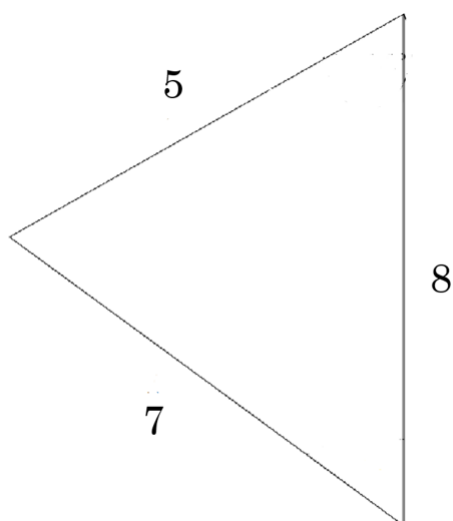
Q1. Find the length of side BC in the triangle below to 1 decimal place.



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



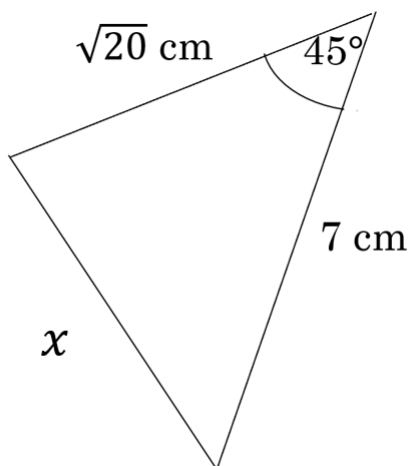
Q2. Find the size of the largest angle in the triangle below to 2 decimal places.



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



Q3. Find an expression for  $x^2$  where  $x$  is the length shown in the triangle below, giving your answer in the form  $a + b\sqrt{c}$ , where  $a$ ,  $b$  and  $c$  are integers.

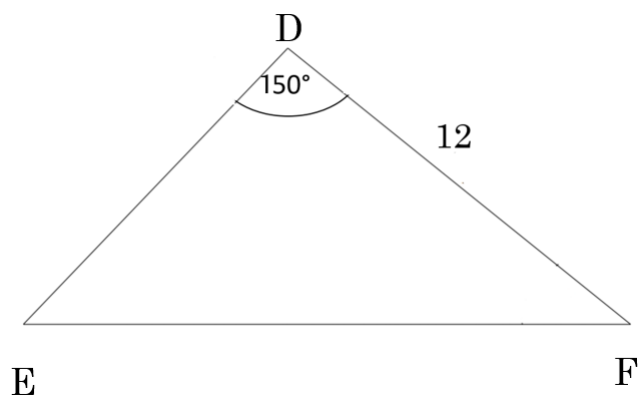


Answer: \_\_\_\_\_

(4 marks)



Q4. The area of the triangle below is 30 squared units.



- (i) Find the length of side DE to 1 d.p.

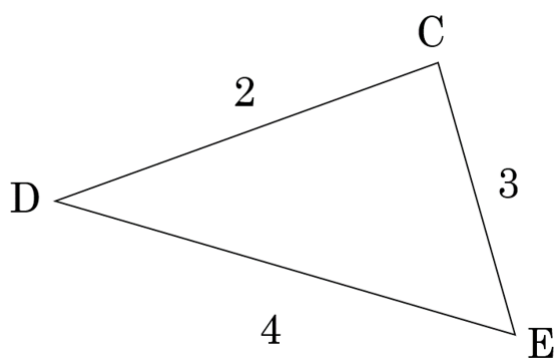
Answer: \_\_\_\_\_  
(3 marks)

- (ii) Find the perimeter of the triangle to 3 s.f.

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



Q5.



- (i) Show clearly that  $\cos(E) = \frac{7}{8}$

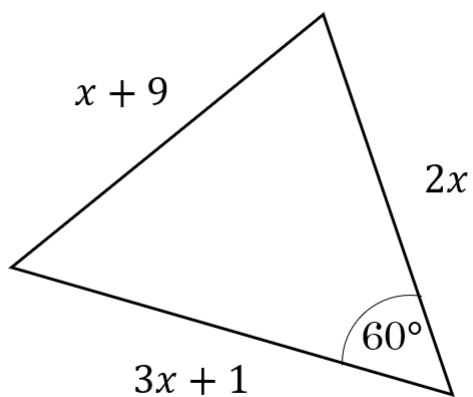
Answer: \_\_\_\_\_  
(4 marks)

- (ii) Hence show that the exact area of the triangle is  $\frac{3}{4}\sqrt{15}$ .

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



Q6. Find the area of the triangle below:

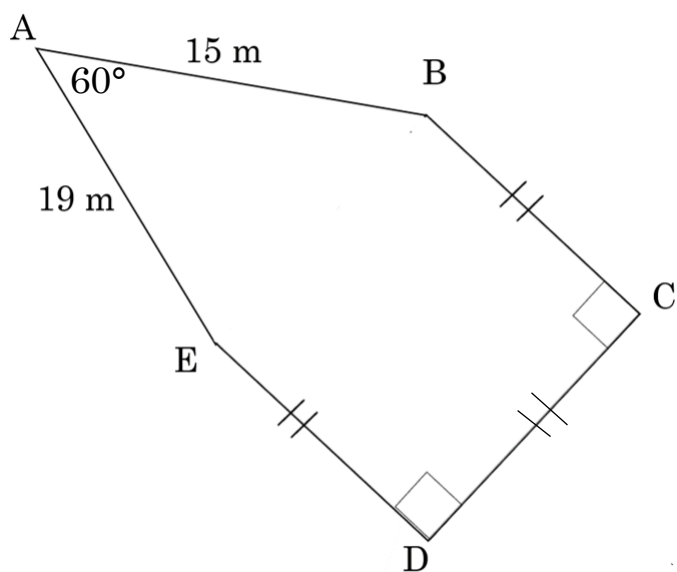


Answer: \_\_\_\_\_

(7 marks)



Q7. Below is a diagram of a garden:



Fencing is to be placed around the perimeter of the garden. If the fencing costs £7.50 per metre, work out the total cost.

Answer: \_\_\_\_\_  
(6 marks)



Q8. Ship A is 14 km from a lighthouse on a bearing of  $053^\circ$ . Ship B is 10.5 km from the same lighthouse on a bearing of  $162^\circ$ .

- (i) Calculate the distance between the two ships, giving your answer to the nearest metre.

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

- (ii) Calculate the bearing of ship B from ship A giving your answer to the nearest tenth of a degree.

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