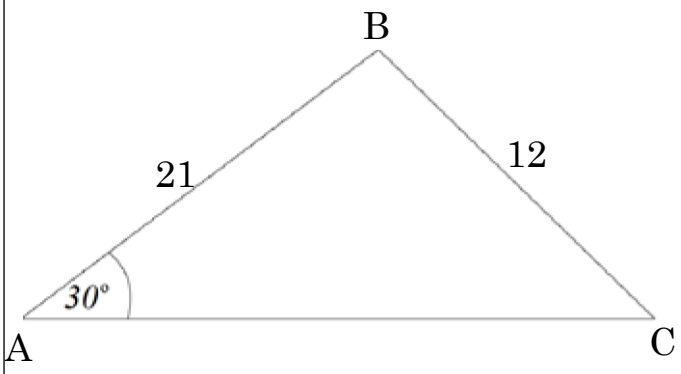
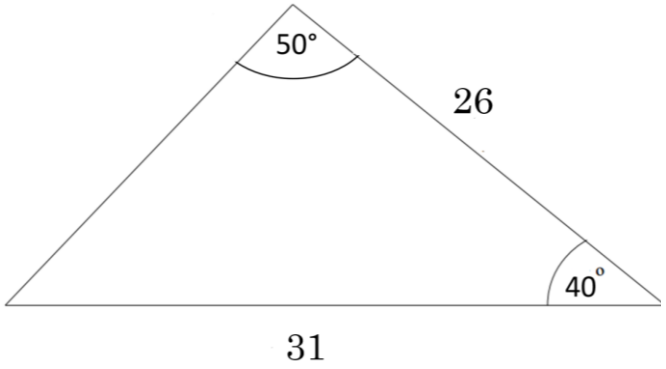
# The Sine Rule Exam Practice

Q1. Find the size of the acute angle BCA in the triangle below to 1 decimal place.



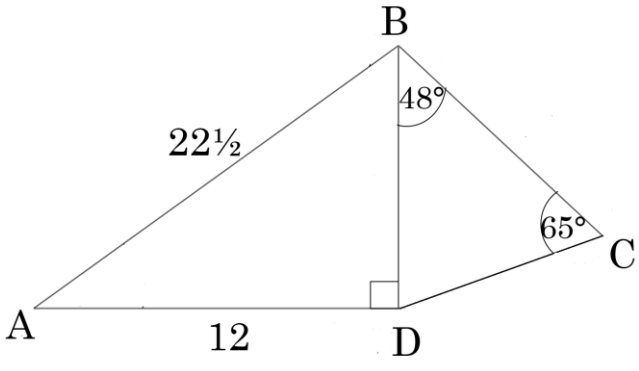

(3 marks)

Q2. Find the length of the missing side in the triangle shown to 1 decimal place.




(3 marks)

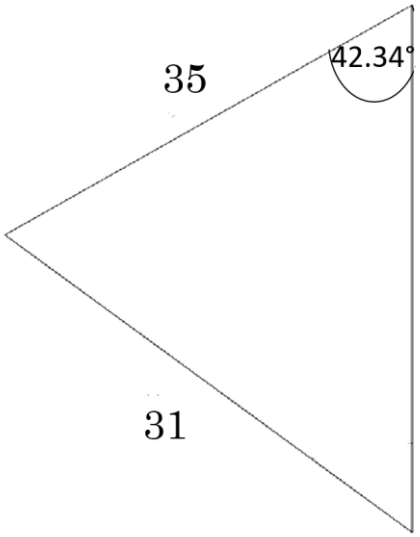
Q3. Find the length of the side BC in the triangle below to 2 decimal places.




(5 marks)

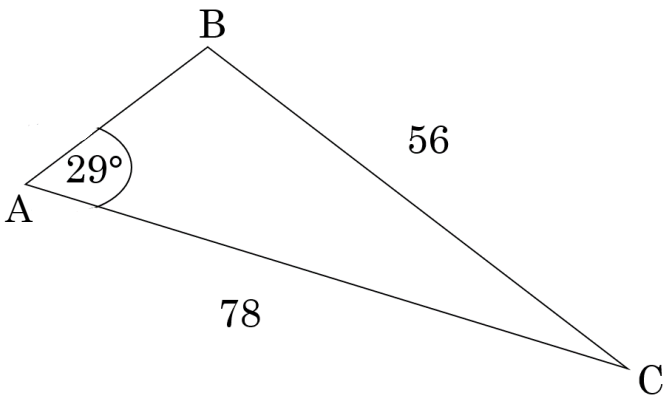
Q4. The area of the triangle below is 542.22 squared units.

Find the size of the missing side to 1 decimal place.



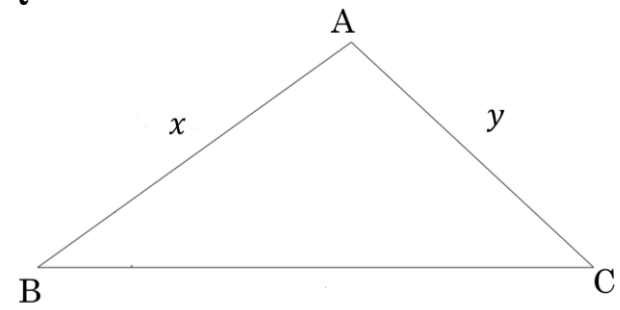

(5 marks)

Q5. Find the obtuse angle B.




(4 marks)

Q6.




You are given that $\sin(A) = \frac{84}{85}$, $\sin(B) = \frac{8}{17}$ and $\sin(C) = \frac{4}{5}$.

a) Use the sine rule to show that

$$y = \frac{17}{10}x$$

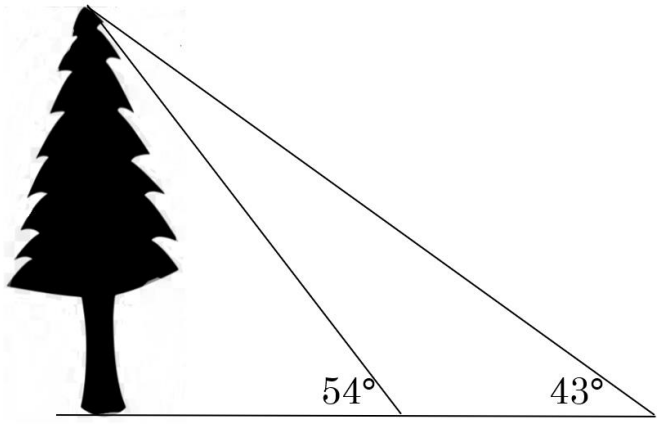
(3 marks)

b) The area of the triangle is $21\text{cm}^2$
Find the value of $x$ and $y$.

(3 marks)

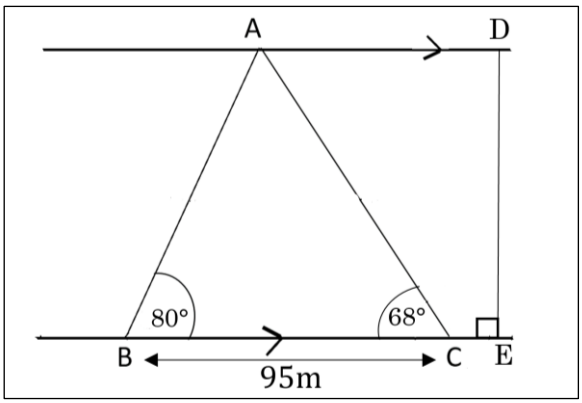
Q7. Two people stand facing a tall tree in a straight line. Each person measures their angle of elevation to the top of the tree.

The distance between the people is 22 m. Find the height of the tree to the nearest cm.




(4 marks)

Q8.




Below is a diagram of a river with parallel river banks. There are 3 bridges which cross the river: AB, AC and DE. Three boys cross the river each using a different bridge, each at a constant 2 m/s. Work out the difference between the slowest and fastest times to the nearest second.

(6 marks)