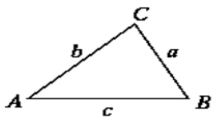
Sine and Cosine Rule Exam Questions

In any triangle ABC

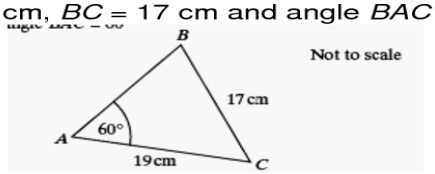
Area of triangle $= \frac{1}{2}ab\sin C$

Sine rule $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

Cosine rule $a^2 = b^2 + c^2 - 2bc\cos A$

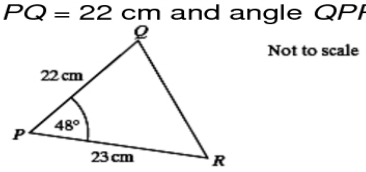


ABC is a triangle. $AC = 19$ cm, $BC = 17$ cm and angle $BAC = 60°$



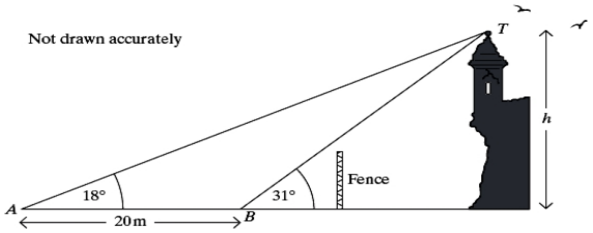
Calculate the size of angle ABC. *(3 marks)*

PQR is a triangle. $PR = 23$ cm, $PQ = 22$ cm and angle $QPR = 48°$



Calculate the length of QR.
Give your answer to an appropriate degree of accuracy. *(4 marks)*

A ruined tower is fenced off for safety reasons.
To find the height of the tower Rashid stands at a point A and measures the angle of elevation as 18°. He then walks 20 metres directly towards the base of the tower to point B where the angle of elevation is 31°.



Calculate the height, h, of the tower. *(6 marks)*