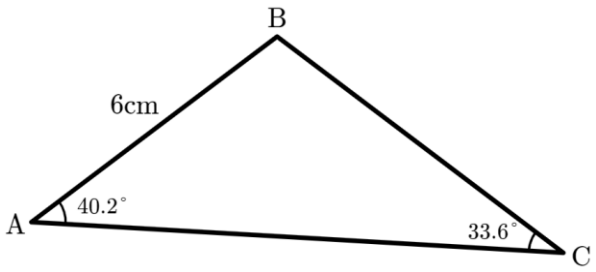
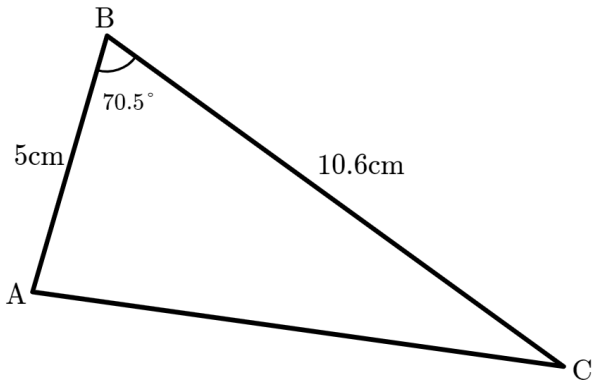
a)
Calculate the length of the side BC.
Give your answer to 3 significant figures.



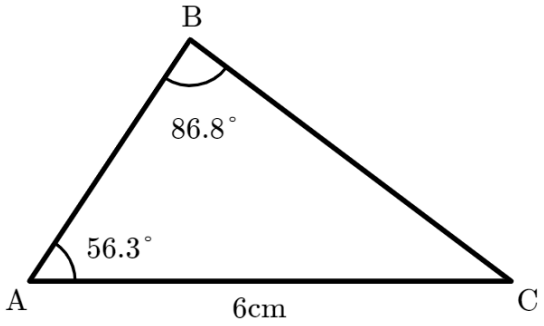
Sine or cosine rule?	The missing side is opposite a known angle, and we have another pair of sides and opposite angles $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$
Substitute known values	$\frac{6}{\sin 33.6} = \frac{BC}{\sin 40.2}$
Rearrange to find the specified side	$\frac{6 \sin 40.2}{\sin 33.6} = BC$
Calculate the length of the specified side	$BC = 6.998202505 = 7.00\text{cm}$

b)
Calculate the length of the side AC.
Give your answer to 3 significant figures.



Sine or cosine rule?	The missing side is opposite a known angle, and we have the other two sides $a^2 = b^2 + c^2 - 2bc \cos A$
Substitute known values	$AC^2 = 5^2 + 10.6^2 - 2 \times 5 \times 10.6 \cos 70.5$
Calculate the length of the specified side	

c)
Calculate the length of the side AB.
Give your answer to 3 significant figures.



Sine or cosine rule?	The missing side is opposite a known angle, and we have another pair of sides and opposite angles $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$
Substitute known values	
Rearrange to find the specified side	
Calculate the length of the specified side	

d)
Calculate the length of the side AC.
Give your answer to 3 significant figures.