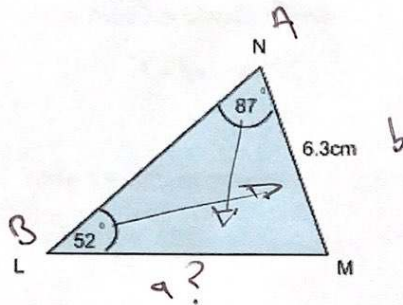




QT The Sine Rule - calculations

1. Work out the length LM correct to 3 significant figures.

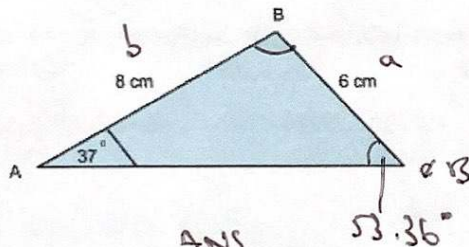


$$\frac{a}{\sin A} = \frac{b}{\sin B}$$

$$\frac{a}{\sin 87} = \frac{6.3}{\sin 52}$$

$$\begin{aligned} a &= \sin 87 \times \frac{6.3}{\sin 52} \\ &= 7.9835\dots \\ &= \underline{\underline{7.98 \text{ cm}}} \end{aligned}$$

2. Work out the size of angle ABC. Give your answer correct to 1 decimal place.



$$\frac{\sin A}{a} = \frac{\sin B}{b}$$

$$\frac{\sin 37^\circ}{6} = \frac{\sin B}{8}$$

$$\frac{\sin 37^\circ \times 8}{6} = \sin B$$

$$\left(\frac{\sin 37^\circ \times 8}{6} \right) = \sin^{-1}$$

$$53.36^\circ = B$$

ANS
 $180 - 37 - 53.36$
 $= 89.638\dots$
 $\angle ABC = \underline{\underline{89.6^\circ}}$