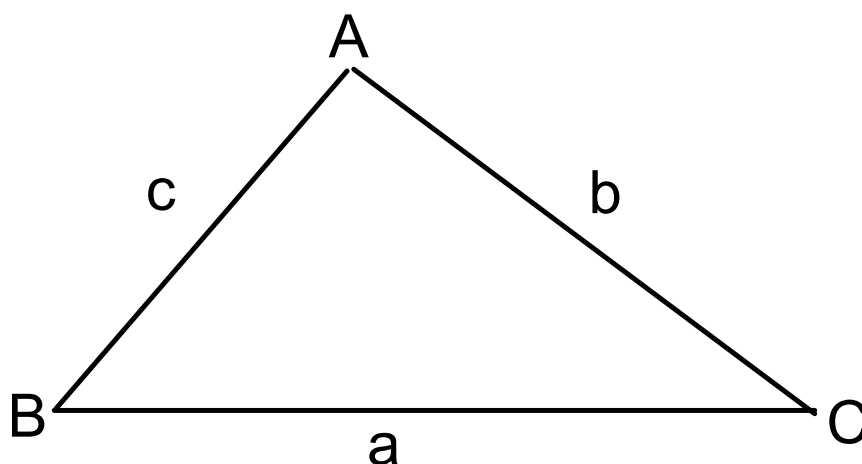
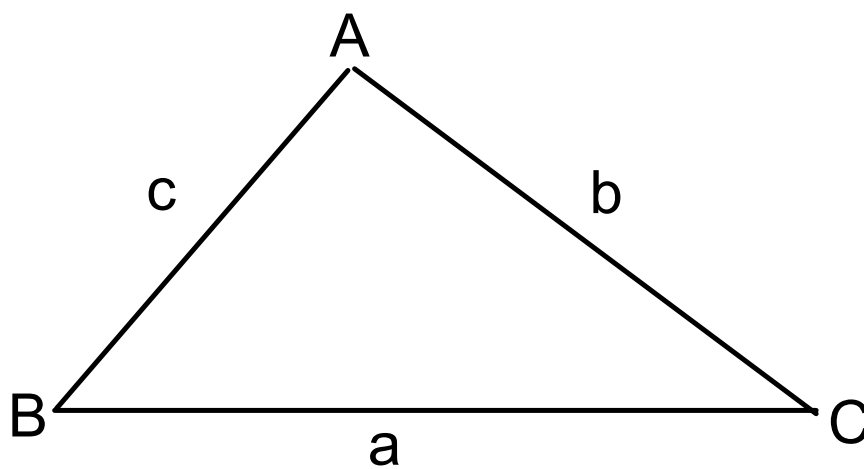


Sine law for non right triangles



The sides in a triangle are directly proportional to the sine of the opposite angles to these sides

Sine law for non right triangles



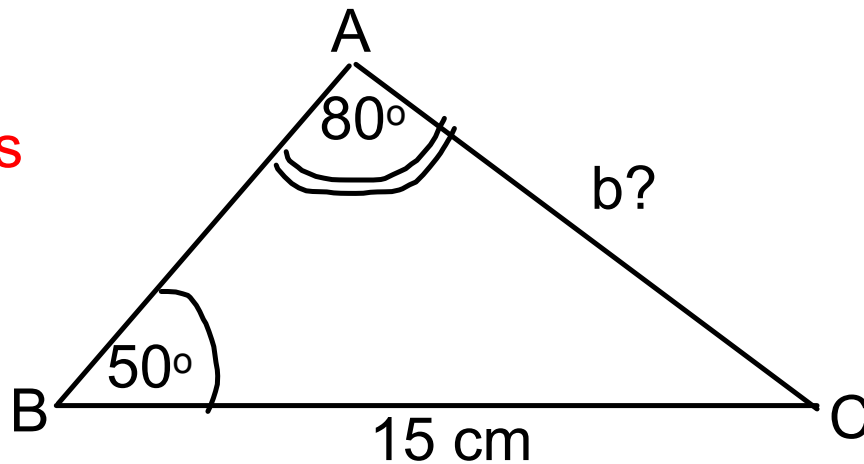
$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

Sine law for non right triangles

Case 1:

2 angles

1 side



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

$$\frac{a}{\sin 50} = \frac{15}{\sin 60} = a(\sin 60) = 15(\sin 50)$$

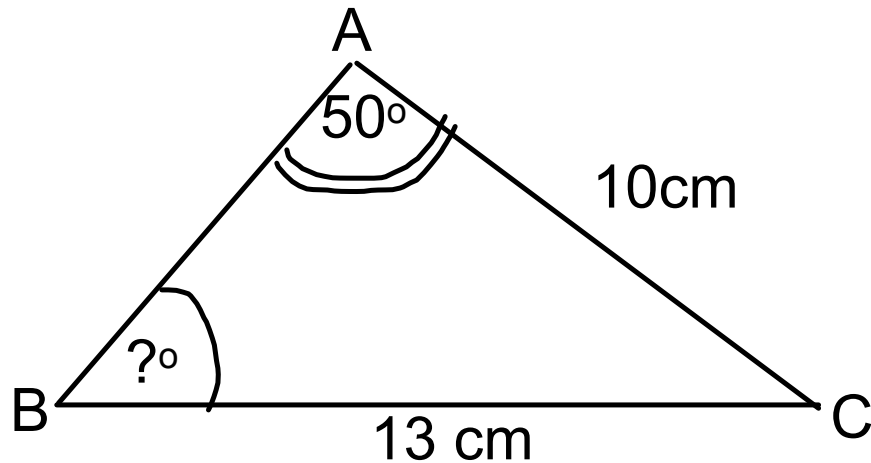
$$a = \frac{15(\sin 50)}{\sin 60} = 13.27$$

Sine law for non right triangles

Case 2:

2 sides

1 angle



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

$$\frac{10}{\sin B} = \frac{13}{\sin 50} = 10(\sin 50) = 13(\sin B)$$

$$\sin B = \frac{10(\sin 50)}{13} = 0.5893$$

$$\sin^{-1}(0.5893) = 36^\circ$$