

$$i) \frac{23}{\sin 105} = \frac{18}{\sin C}$$

$$23(\sin C) = 18(\sin 105)$$

$$\sin C = \frac{18(\sin 105)}{23}$$

$$\frac{18 \times 0.97}{23} = 0.76$$

$$C = \sin^{-1}(0.76)$$

$$C = 49.46^\circ$$

$$ii) B = 105 + 49.46 = 154.46^\circ$$

$$B = 180 - 154.46 = 25.54^\circ$$

$$iii) \frac{b}{\sin(25.54)} = \frac{23}{\sin(105)}$$

$$b = \frac{23 \sin 25.54}{\sin 105}$$

$$b = \frac{23(0.43)}{\sin 105}$$

$$b = \frac{9.92}{\sin 105}$$

$$b = 10.27 \text{ cm}$$