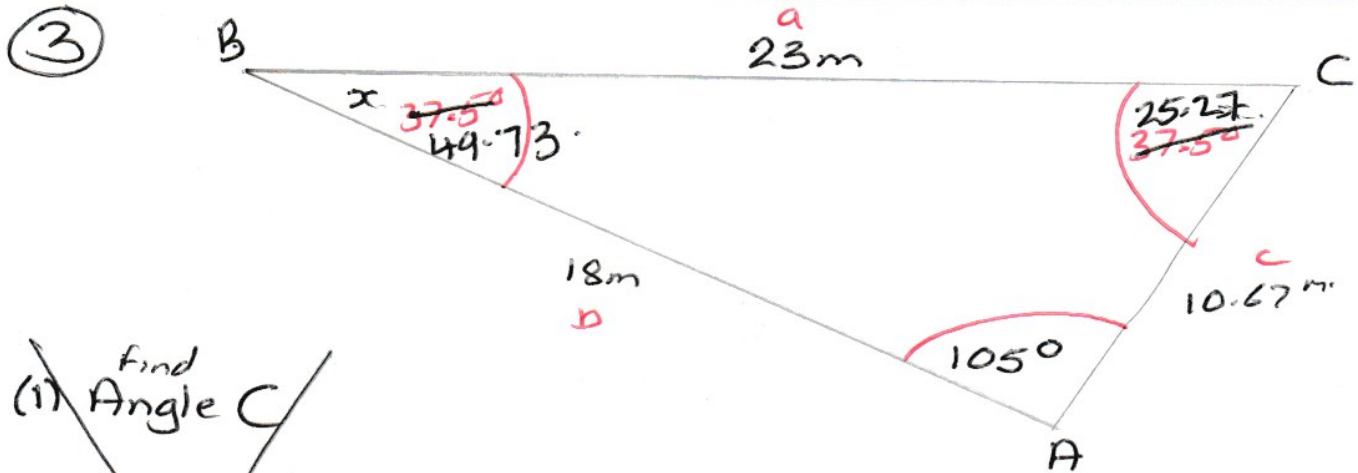




(i) Find Angle C

$$x + x + 105 = 180$$

$$2x + 105 = 180$$

$$2x = 180 - 105$$

$$2x = 75$$

$$x = \frac{75}{2}$$

$$x = 37.5$$

$$\therefore \text{Angle C} = 37.5^\circ$$

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

$$c^2 = a^2 + b^2 - 2ab \cos A$$

$$c^2 = 23^2 + 18^2 - 2(23)(18) \cos 105^\circ$$

$$c^2 = 529 + 324 - 214.30$$

$$c^2 = 529 + 324 - 214.30$$

$$\sqrt{c^2} = 638.7$$

$$c = \pm 25.27^\circ$$

(ii) Find Angle B

$$\therefore \text{Angle B} = 37.5^\circ$$

$$180^\circ - 105^\circ - 25.27^\circ$$

$$\therefore \text{Angle B} = 49.73^\circ$$

(iii) length AC.

$$c^2 = 23^2 + 18^2 - 2(23)(18) \cos 105^\circ$$

$$c^2 = 10.67m$$

$$AC = 10.67m$$

$$AC = 11m ?$$

$$c^2 = a^2 + b^2 - 2ab \cos A$$