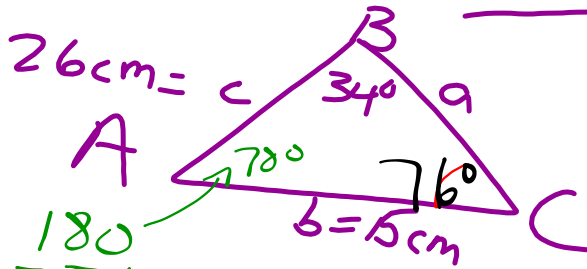


Feb. 26, 2020

Example 3: In triangle ABC, side b = 15 cm, side c = 26 cm, and the angle B is 34°. Solve the triangle.



$$\begin{array}{r} 180 \\ - 76 \\ - 34 \\ \hline 70 \end{array}$$

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

$$\frac{a}{\sin 70} = \frac{15}{\sin 34^\circ}$$

$$a = 25 \text{ cm}$$

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

$$\frac{\sin C}{26} = \frac{\sin 34}{15}$$

$$15 \cdot \sin C = 26 \cdot \sin 34$$

$$\sin C = \frac{26 \cdot \sin 34}{15}$$

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

$$C = 76^\circ$$

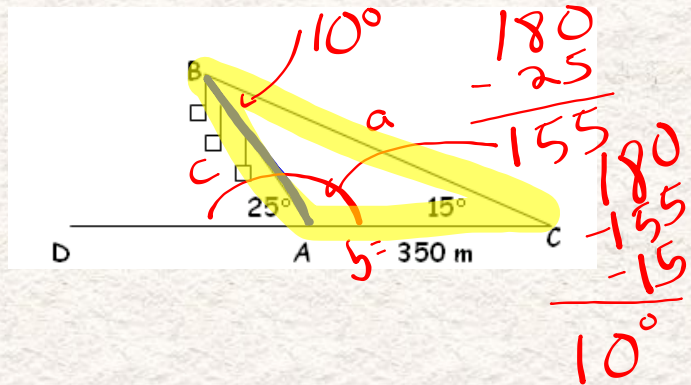
Applications of Trigonometry

2. To find the length of a proposed ski lift from A to B, a surveyor measures the angles DAB and ACB and records them. The distance between C and A is 350 m. What is the distance from A to B? (c)

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

$$\frac{c}{\sin 15^\circ} = \frac{350}{\sin 10^\circ}$$

$$c = 521.7m$$



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Attachments

PM11-3s2.gsp