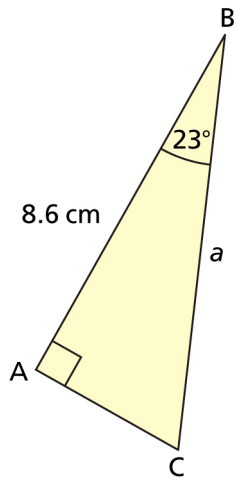


Finding Lengths: Cosine

Find a Side Length Using Cosine

Determine the measure of length a .



Alt Text: This illustration shows a right triangle with hypotenuse 8.6 cm and reference angle 23° .

Solution

$$\cos B = \frac{\text{adjacent}}{\text{hypotenuse}}$$

$$\cos 23^\circ = \frac{8.6 \text{ cm}}{a}$$

$$(a)(\cos 23^\circ) = \left(\frac{8.6 \text{ cm}}{a}\right)(a)$$

$$(a)(\cos 23^\circ) = 8.6 \text{ cm}$$

$$\frac{(a)(\cos 23^\circ)}{\cos 23^\circ} = \frac{8.6 \text{ cm}}{\cos 23^\circ}$$

$$a = 9.3 \text{ cm}$$