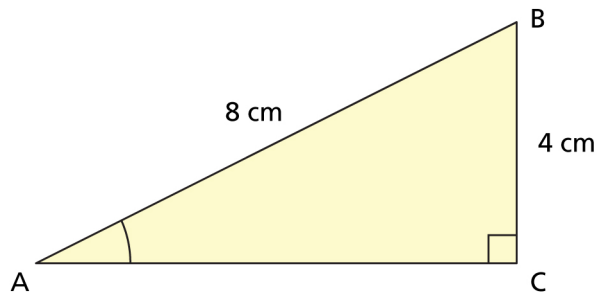


Finding Angles: Sine

Find an Angle Using Sine

Determine the measure of angle A.



Alt Text: This illustration shows a right triangle with hypotenuse 8 cm and opposite side 4 cm.

Solution

To determine angle BAC, we must use the information given. Side BC is opposite the angle, and side AB is the hypotenuse. Therefore, we must use sine.

$$\sin \text{BAC} = \frac{\text{opposite}}{\text{hypotenuse}}$$

$$\sin \text{BAC} = \frac{4 \text{ cm}}{8 \text{ cm}}$$

$$\sin \text{BAC} = 0.5$$

$$\sin^{-1}(\sin \text{BAC}) = \sin^{-1}(0.5)$$

$$\text{BAC} = 30^\circ$$