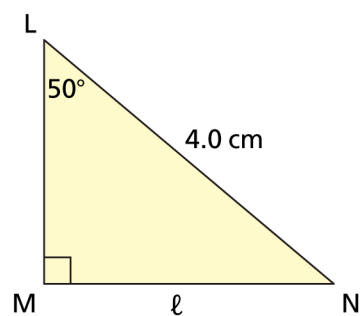


Finding Lengths: Sine

Find a Side Length Using Sine

Determine the measure of length ℓ .



Alt Text: This illustration shows a right triangle with hypotenuse 4.0 cm and reference angle 50°.

Solution

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

$$\sin 50^\circ = \frac{\ell}{4 \text{ cm}}$$

$$(4 \text{ cm})(\sin 50^\circ) = \left(\frac{\ell}{4 \text{ cm}}\right)(4 \text{ cm})$$

$$(4 \text{ cm})(\sin 50^\circ) = 3.1 \text{ cm}$$