Convert 8 meters to feet. Round to the nearest hundredth.

Linear Measure

2.54 cm = 1 in

1 foot (ft) = 12 inches (in)

1 yard (yd) = 3 ft

1 mile (mi) = 5280 ft

1 kilometer (km) = 1000 meters (m

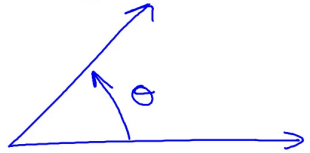
100 centimeters (cm) = 1 m

1760 yds = 1 mi

$$8\text{ m} \cdot \frac{100\text{ cm}}{1\text{ m}} \cdot \frac{1\text{ in}}{2.54\text{ cm}} \cdot \frac{1\text{ ft}}{12\text{ in}} = 26.25\text{ ft}$$

What is the measure of an angle?

The size of an angle
or
The amount of rotation to move from one side of the angle to the other side.



Units used to measure angles:

- Degrees
- Radians

A full circle measured in degrees = 360°

A full circle measured in radians = 2π

Therefore, 360° = 2π

This can be reduced to 180° = π

To convert between degrees and radians you can use one of the following conversion factors:

$$\frac{\pi}{180^\circ} \quad or \quad \frac{180^\circ}{\pi}$$

Convert each angle into degrees. Round to the nearest tenth when needed.

1. $\frac{2\pi}{3}$ 2. $\frac{5\pi}{9}$ 3. $\frac{23\pi}{15}$

$\frac{2\pi}{3} \cdot \frac{180^\circ}{\pi}$ $\frac{5\pi}{9} \cdot \frac{180^\circ}{\pi}$ $\frac{23\pi}{15} \frac{180^\circ}{\pi}$

$= 120^\circ$ $= 100^\circ$ $= 276^\circ$

Convert each angle into radians. Give answer in terms of π and as a simplified fraction.

1. 45° 2. 150° 3. 210°

$45^\circ \cdot \frac{\pi}{180^\circ}$ $150^\circ \cdot \frac{\pi}{180^\circ}$ $210^\circ \cdot \frac{\pi}{180^\circ}$

÷30 = 5, ÷3 = 6; ÷30 = 7, ÷30 = 6

$= \pi/4$ $= \frac{5\pi}{6}$ $= \frac{7\pi}{6}$

$\frac{\pi}{180^\circ}$ $\frac{180^\circ}{\pi}$

Convert each angle into the other unit of measure. Round degrees to the nearest hundredth where necessary. Give radian measure as a fraction in terms of π and in simplest form.

1. 990° 2. 8

$990^\circ \cdot \frac{\pi}{180^\circ}$ ÷90 ÷90

$= \frac{11\pi}{2}$

$8 \cdot \frac{180^\circ}{\pi}$

$= 458.37^\circ$

Radian measure at each axis.