



The University of Georgia

Mathematics Education Program

J. Wilson, EMAT 6600

Volume of a Can

By Leighton McIntyre

Goal: Calculate the volume of a 12-ounce can in cubic centimeters

Problem

What is the volume of a 12-ounce can? In other words, how many cubic inches in a 12 oz can? Make a guess.

A little over 20 in³, say maybe about 23 in³,

Measure the radius and height of a soda can and compute an estimate.

Radius (r) = 1.25 inches

Height (h) = 4.8 inches

Using formula for volume of cylinder $V = \pi r^2 h$

Volume of can = $3.14159265358979 * 1.25 * 1.25 * 4.8$
= 23.561944901923425

So there are approximately 24 cubic inches in a 12 oz can.



How many cubic centimeters are in a 12-ounce can?

I measured the radius and height of the 12-oz can this time in cm

Radius (r)= 3.2 cm

Height (h) = 12.1 inches

Using formula for volume of cylinder $V = \pi r^2 h$

$$\text{Volume of can} = 3.14159265358979 * 3.2 * 3.2 * 12.1 = 389$$

So there are approximately 389 cubic centimeters in a 12 oz can.

There are about 389 cubic centimeters in a 12-ounce can
