# The JETS Challenge

Provided by Dave Meredith, Associate Professor,
Penn State University-Fayette

## Challenge 73 — The Ice Challenge

### Problem:

A typical fast food restaurant uses about 0.4 pounds of ice per customer. A cubic foot of ice weighs 57 pounds. Assume that each of the 250 million Americans visits a fast food restaurant twice each week.

If all of the ice used during one year in fast food restaurants could be stacked into a single solid cube, what would be the height (feet) of that ice cube?

### Solution:

0.4 lbs.

$0.4 \times$ 250 million = 100 million lbs.

$52 \times 2 = 104$ trips per year per person

#lbs. total $= 104 \times$ 100 million

= 10,400 million lbs.

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1 $ft^3$ weight 57 lbs.

$$\frac{1\ \text{ft}^3}{57\ \text{lbs}} = \frac{x\ \text{ft}^3}{10{,}400\ \text{million lbs.}}$$

$182{,}456{,}140.351\ \text{ft}^3 = x =$ Volume

height $= \sqrt[3]{182{,}456{,}140.351}$

= 567 feet