

## Unit Conversions

A 12 ounce box of Greenies costs \$12.99. A 30 ounce box costs \$26.99

- (a) What is the cost in dollars per ounce in each box? Which size should you buy?
- (b) Suppose you have a coupon worth \$5 toward the price of any box of Greenies. If you use the coupon, which size should you buy? Is it always better to buy the large economy size?
- (c) Answer the previous question if your coupon gives you a 10% discount rather than \$5 off.

According to the United States Department of the Treasury, the national debt on January 1, 2013 was \$16,432,730,050,569.12  $\approx$  \$16.5 trillion.

(a) Estimate the average share of the debt for each person in the United States on January 1, 2013.

(b) By some estimates, the debt increases an average of just over \$2.5 billion per day. Use the web to find the current national debt of the United States and comment on the accuracy of those estimates.

(c) Find the current population of the United States and update the average share of the debt for each person.

(d) Choose a different country and use the web to find its current national debt. Estimate the average share of the debt for each person in that country and compare this to what you calculated for the United States.

On February 18, 2012, Scott W. of Chapel Hill, NC responded to an article in *The New York Times* saying that a car that averaged 35 mpg instead of 20 would cut your gas bill almost in half.

Is Scott W.'s arithmetic right?