1.3 Problem Solving continued

1. At the beginning of a year, the odometer on a car read 25,124 miles. At the end of the year, it read 37,364 miles. If the car averaged 24 miles per gallon, how many gallons of gasoline did it use during the year?

2. If you spend $4.79, in how many ways can you receive change from a five-dollar bill?

3. For a unit price, what number does the unit part refer to?

4. When dealing with money, rounding appropriately means rounding to what place?
5. Give an example of a unit price, including units.

6. A 16-oz jar of Simply Balanced Creamy/Crunchy peanut butter costs $4.89. Find the unit price of a 16-oz jar of Simply Balanced peanut butter. Round appropriately and include units.

7. Answer the following. Always round appropriately and include units.
   a) What brand and size of peanut butter do you usually buy?
   b) Look online to find the cost of the jar.
   c) What is the unit price?
   d) What is the best way to compare two items of different sizes and prices at the grocery store?
e) Find the unit price of a comparable jar of peanut butter (different size than the one you chose in part (a)) that you have considered switching to.

f) Which is the better buy of the peanut butter you chose in (a) and (e)?

8. I love peanut butter and have considered buying it in bulk. I compare a 40-ounce jar of Jiffy at two different stores. The unit price, $.12, at one store is given in terms of cost per ounce and at the other store, $2.24 is given in terms of cost per pound.

a) What do I do so I can compare the two?

b) Which should I buy?
9. At a supermarket, a 15.3 ounce box of cereal costs $3.37 and a 24-ounce box of cereal costs $4.59. Answer the following and, when necessary, round appropriately.

a) Which is the better deal?

b) Consider the expression \( \frac{6.34}{40} \times 16 \).

(i) Evaluate this expression by plugging it into your calculator. Round to the nearest hundredth.

(ii) Evaluate this expression by first evaluating and rounding \( \frac{6.34}{40} \) and then multiplying by 16. Do this for rounding the first expression the nearest tenth, hundredth, and thousandth.
(iii) If you want the answer to be accurate to the nearest hundredth (or in terms of money, the nearest cent), describe in your own words how to handle rounding.

c) The supermarket displays the unit price for the 15.3 ounce box in terms of cost per ounce, but displays the unit price for the 24-ounce box in terms of cost per pound. What are the unit prices?