Problem of the Week
Problem A and Solution
Watermelons for Sale

Problem

This week's flyer advertises watermelons on sale. Jared notices that the advertisement says: "One watermelon for \$4.50 or three watermelons for \$13.50."

A) Explain which is the better deal for watermelons.

B) Why do you think the advertisement is written this way?

   The flyer also advertised: "2 L of milk for \$2.15 or 4 L of milk for \$4.70". He needs 12 L of milk for the week.

C) Which is the better deal for milk?

D) How much money does Jared save if he buys the better size of milk? Explain your answer.

Solution

A) If Jared bought three watermelons individually it would cost:
   \$4.50 + \$4.50 + \$4.50 = \$13.50. There is no savings buying three at once.

B) The store might advertise the cost of three watermelons as a way to get buyers to purchase more than one item.

C) The cost for 4 L of milk if Jared bought two 2 L cartons is
   \$2.15 + \$2.15 = \$4.30. So, buying the 2 L size is a better deal.

D) Based on the calculation in part C), it would be $4.70 - 4.30 = \$0.40$ (or 40 cents) cheaper to buy two 2 L cartons rather than one 4 L carton of milk. Since 3×4 L $= 12$ L, then Jared would save $3 \times \$0.40 = \$1.20$.

Teacher's Notes

Shopping for groceries provides a wealth of mathematical problems, from careful study of the "deals" in flyers, to the various ways items are priced, to the ingredients lists on products, and more.

Stores use various marketing techniques to try to get the public to buy more. One of the most popular is to advertise *"Buy One Get One Free"*. Of course you are not actually getting anything for free, because you must spend money to get them both. The best way to confirm that you getting the best price for a purchase is to calculate the unit cost of the items that you are buying. The units you are comparing may be individual items such as whole watermelons, or units of measurement such as litres or grams.