

Lesson 4: Unit Pricing

Pre-Lesson Vocabulary Practice

Read the words and their meanings on the right. Next carefully read the lesson, and try to find the words.

Work with a partner. Quiz each other on the vocabulary words and their meanings. Then take turns—one of you reads aloud a term from the list while the other finds the correct meaning and reads it aloud.

Read the definitions of the units of measurement.

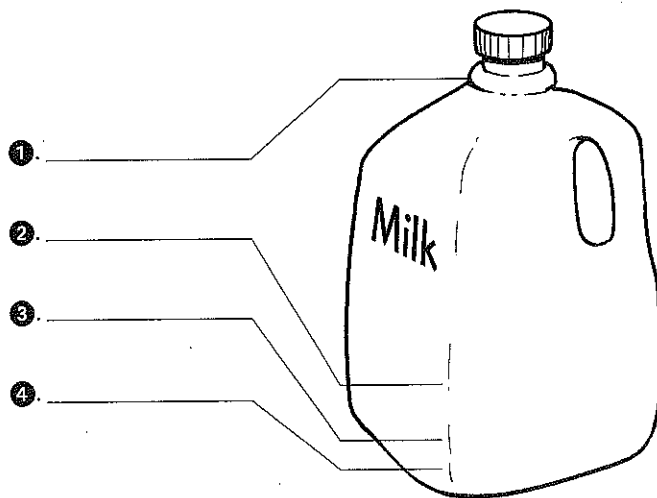
ounce – a small liquid measurement, equal to $\frac{1}{16}$ of a pint

quart – 2 pints

pint – 16 fluid ounces

gallon – 4 quarts

Now write the appropriate names for the different units in the blanks below.



area – total surface of length x width

better value / better buy – a more economical purchase than another purchase; a lower price

high-nutrition – good for one's health

linear unit – a length, such as an inch or a foot

liquid – a fluid such as water

packaged – the way or manner in which something is contained

pound – a weight of sixteen ounces

quickly – rapidly, fast

regular grade gasoline – the lowest-priced liquid used to power vehicles

required – necessary

to compare – to see how two or more things are similar or different

to display – to show

to measure – to find a specific dimension or quantity

to round – to make an estimate that is close to an original amount

Answers are on page 257.

Lesson 4

Unit Pricing

To shop wisely, a customer should **compare** prices of similar items.

However, it is not always easy to compare prices when similar items are packaged differently.

For example, which is a better value, a 10-ounce can of string beans that costs \$0.59 or a 16-ounce can of string beans that costs \$1.04?

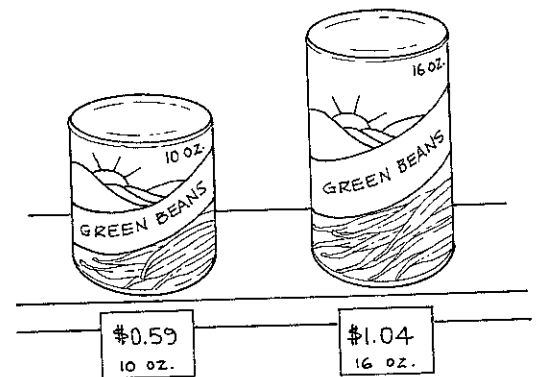
Most grocery stores are now required by state laws to display the **unit price** of the items on their shelves. A unit price is the price for one unit of measurement such as an ounce or a quart.

To calculate a unit price, divide the cost of an item by the number of units in the item.

A unit price is the cost *per* unit. The word *per* is a Latin word that means **for each**. Use a calculator to find unit prices quickly.

Example 1

Which of the two cans of string beans is a better buy?



Solution

The unit price of the 10-ounce can is

$$\$0.59 \div 10 = \$0.059 \text{ per ounce.}$$

The unit price of the 16-ounce can is

$$\$1.04 \div 16 = \$0.065 \text{ per ounce.}$$

The 10-ounce can is the better buy because the unit price is lower than the unit price for the 16-ounce can.

Unit pricing is based on **weight, liquid measure, count, or area**. The unit prices of the cans of beans in the last example were measured in the price per unit of weight. Meat, poultry, fish, and frozen foods are usually measured in units of weight.

Read the labels on packaged items carefully. A label that gives the price for 2.4 pounds of chicken is not giving the price for 2 pounds 4 ounces of chicken. The price is for two and four-tenths pounds.

The unit prices of beverages, oils, and cleaners are usually given as the price per liquid unit such as a pint, a quart, or a fluid ounce.

Example 2

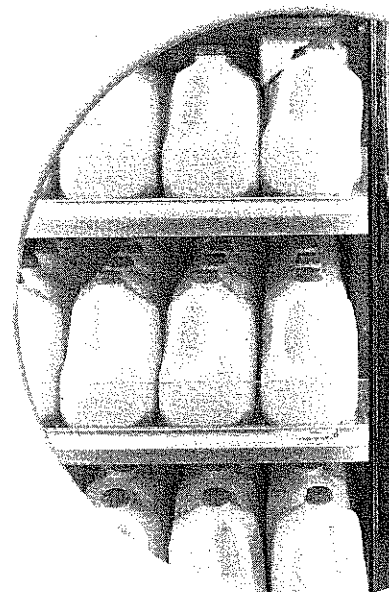


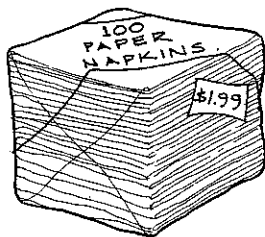
Find the unit price of a 13.5-fluid ounce container of shampoo that costs \$2.19.

Solution Divide to find the unit price.

$$\begin{aligned} \$2.19 \div 13.5 &= \$0.16222\dots \\ &\text{or about } \$0.16 \text{ per fluid ounce.} \end{aligned}$$

The price of items such as scrubbing pads, tea bags, and facial tissues is often measured in the price per count. The unit price is the price for one item in the package. To find the unit price, divide the price of the package by the number of items in the package.



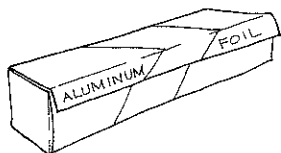


Example 3 What is the unit price of 100 paper napkins that cost \$1.99?

Solution Divide to find the unit price.

$$\$1.99 \div 100 = \$0.0199 \text{ or about } \$0.02 \text{ per napkin}$$

The unit price of some products such as wax paper, aluminum foil, and paper towels is given as the price for a unit of area such as a square foot or a square meter. The formula for the area of a rectangle is $A = lw$ where A is the area, l is the length, and w is the width. Area is measured in square units such as square feet, square inches, or square meters. Length and width are measured in linear units such as feet, inches, or meters.



Example 4 What is the area in square feet of the aluminum foil in a roll that is 12 inches wide and $8\frac{1}{3}$ yards long?

Solution The length is $8\frac{1}{3} \times 3 = \frac{25}{3} \times \frac{3}{1} = 25$ feet.

The width is 12 inches or 1 foot.

$$A = 25 \times 1 = 25 \text{ square feet}$$

Example 5 Find the unit price of a 25-square-foot roll of aluminum foil that costs \$1.15.

Solution The unit price is $\$1.15 \div 25 = \0.046 or a little less than 5 cents per square foot.

To solve the problems in the next exercise, review:

- dividing decimals, page 231
- units of measurement, page 239
- rounding decimals, page 229
- calculating area, page 241

Exercise 4

Part A

Use a calculator to solve these problems.

- 1 To the nearest penny, what is the unit price of a package of ground beef that weighs 2.6 pounds and costs \$4.13?
- 2 A plastic container holds 180 multiple vitamins. Find the unit cost if the price of the container is \$12.49.
- 3 A half gallon of milk costs \$1.79. What is the cost per quart of the milk?
- 4 What is the cost per gallon of the milk in the last problem?
- 5 What is the unit cost of a 100-square-foot roll of aluminum foil that costs \$3.29?
- 6 What is the area in square feet of the wax paper in a roll that is 12 inches wide and $66\frac{2}{3}$ yards long?
- 7 A 75-square-foot roll of Ace aluminum foil costs \$2.79. A 25-square-foot roll of Baxter aluminum foil costs \$0.99. Which is the better buy?
- 8 Charlotte wants to get the best value among these three brands of aspirin. Which brand is the best buy?

Brand A costs \$1.99 for 36 aspirin.

Brand B contains 100 aspirin and costs \$5 for 2 jars.

Brand C costs \$2.69 and contains 100 aspirin.

- 9 Breakfast cereals come in a wide variety of packaging and prices. Paulo is comparing the prices of three high-nutrition breakfast cereals. A box of Healthy Start cereal contains 12.5 ounces and costs \$3.29. A box of Better Body cereal costs \$3.79 for 11.4 ounces. And a box of Good Grains cereal costs \$3.19 for 10.75 ounces. Which is the best buy?

