

Section 1.2 Unit Price

Round each of the following to TWO Decimal places.

- | | |
|----------------------|-----------------------|
| 1. \$25.0937 - _____ | 5. \$10.12342 - _____ |
| 2. \$4.4267 - _____ | 6. \$123.9976 - _____ |
| 3. \$6.2545 - _____ | 7. \$643.1668 - _____ |
| 4. \$23.896 - _____ | 8. \$2.8694 - _____ |

Unit Price – how much one item will cost.

- Used to find which is a better deal
- Use proportions or divide price by the number of items

1.2

Unit Price

NEW SKILLS: WORKING WITH UNIT PRICE

unit price: the cost of one unit; a rate expressed as a fraction in which the denominator is 1

When items are sold in quantities of more than 1, the **unit price** indicates how much 1 of the items would cost. For example, if you buy a package of 3 pencils, the unit price is the price of 1 pencil.

For more information, see page 23 of *MathWorks 10*.

Example 1

If a carton of one dozen eggs costs \$3.29, how much are you paying for 1 egg?

SOLUTION

Solve using a proportion. Let x represent the cost of 1 egg.

$$\frac{\$3.29}{12 \text{ eggs}} = \frac{x}{1 \text{ egg}}$$

1. If 12 apples cost \$10.20, how much does one apple cost?

Example 2

Often unit price is used to compare costs.

A 48-oz can of tomatoes costs \$2.99. An 18-oz can costs \$1.19. Which is a better buy?

SOLUTION

Calculate the cost of 1 oz of tomatoes for each size of can.

Try This:

La Boutique du Livre is a francophone bookstore in St. Boniface, MB. It sells notebooks in packages of 12 for \$15.48. Another bookstore sells the same notebooks in packages of 15 for \$19.65. Which is the better price?

Example 3

Shirin is the manager of a fabric store and is training a new employee. Shirin wants to make an easy reference chart that lists the prices of different lengths of a fabric. One metre of the fabric costs \$8.42. Fill in the rest of the chart.

FABRIC COST BY LENGTH	
<i>Length of fabric</i>	<i>Cost of fabric</i>
0.5 m	
1 m	\$8.42
1.75 m	

SOLUTION

You can solve this using proportions.

Try This:

If $2\frac{1}{2}$ kg of tomatoes cost \$8.25, how much will you pay for 7 kg?

PRACTISE YOUR NEW SKILLS

1. During the summer, Dean works as a cashier in a store near Saskatchewan's Greenwater Lake Provincial Park. The store sells a case of 12 bottles of water for \$8.50 and individual bottles of the same brand of water for \$1.55.
 - a) Approximately how much does each bottle of water in the case of 12 cost?

 - b) How much would a customer save by buying a case of water, rather than 12 individual bottles?

2. Maureen purchased enough carpet to cover a rectangular room measuring 7 metres by 12 metres. The carpet costs \$8.15 per square metre.
 - a) How much carpet did Maureen buy?

 - b) How much did the carpet cost?

3. Tyler is a self-employed sheet metal worker. He purchases 25 sheets of aluminum that measure 4 feet by 8 feet. The cost is \$4000.00 before tax and shipping.
 - a) How much does 1 sheet cost?

b) What is the price per square foot?

4. A painting business buys 3-inch wide paintbrushes from a supplier in cases of 6. One case costs \$31.29.

a) How much do two brushes cost?

b) If a customer buys two or more cases, the supplier reduces the price of the case by 10 percent. How much would 3 cases of paintbrushes cost? How much would each brush cost?

5. Which is the better buy: 8 ounces of Brie cheese for \$4.95 or 12 ounces for \$7.49?

6. Debbie is a cook in a restaurant that is open 6 days a week. She is responsible for recording and monitoring the amount of money she spends on food. In the summer, she uses an average of 9 loaves of bread per day.

a) On average, how many loaves of bread does Debbie use each week?

b) If bread costs \$1.25 per loaf to buy from a wholesale distributor, how much money should Debbie budget to purchase it, for the month of June? Assume that there are just 4 weeks in June.

7. The cost of a 355-mL can of juice is \$1.25 in a vending machine. A 1.89-L carton of the same juice costs \$3.89 at the grocery store. How much would you save per mL if you bought juice from the grocery store instead of the vending machine? (Hint: 1 L equals 1000 mL.)

8. Patricio is ordering cartons of detergent for resale in his store. He can order a carton of 12 for \$34.68 plus \$5.45 for delivery, or a carton of 18 for \$51.30 plus \$6.25 for delivery. Which is a better buy, and by how much per unit?