

Practice

- Determine each unit rate.
 - 50 goals scored in 25 games
 - \$400 earned in 40 h
 - \$6.00 for 12 oranges
 - 770 km travelled in 7 h
- Determine each unit rate.
 - \$5.00 for 10 CDs
 - \$2.37 for 3 kg of apples
 - 9 kg lost in 6 weeks
 - 22 km hiked in 5 h
- Twelve hundred litres of water were pumped out of a flooded basement in 8 h. What was the unit rate of outflow?
- Mr. and Mrs. Dell recently finished some renovations to their house. Twenty square metres of carpeting cost \$875. Seventeen square metres of hardwood flooring cost \$750. Which flooring is more expensive per square metre? Explain.
- Alec wants to join one of three online music clubs.

eTunes	Tunezilla	Monstersongs.com
\$21.00 for 20 songs	\$41.65 for 35 songs	\$54.50 for 50 songs

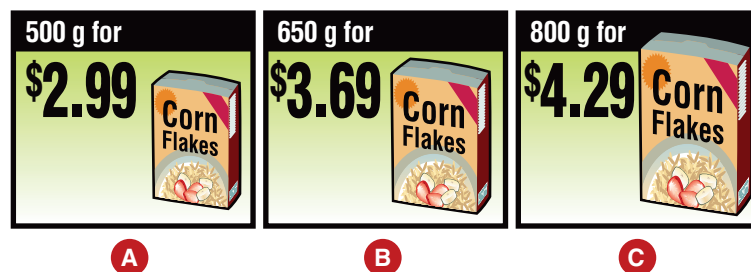
Which music club is more economical? Explain.
- A 12-pack of pop costs \$2.99. The same pop costs \$0.75 per can from a vending machine. Is this a fair price? Explain.



We can use unit rates to determine the best buy.

Example

Cereal comes in 3 sizes.



- Calculate the unit price for each box.
- Which box is the best buy? Explain.

Solution

- a) Since 1 g is very small, we calculate the cost of 100 g.

This is the unit price.

Box A has mass 500 g and costs \$2.99.

500 g is 5×100 g; so, the cost of 100 g of Box A is: $\frac{\$2.99}{5} = \0.598

Box B has mass 650 g and costs \$3.69.

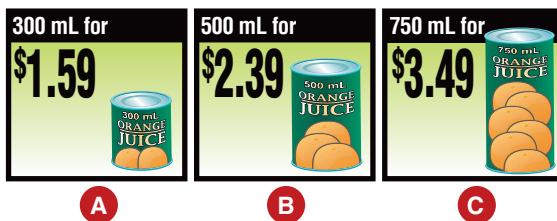
650 g is 6.5×100 g; so, the cost of 100 g of Box B is: $\frac{\$3.69}{6.5} \div \0.568

Box C has mass 800 g and costs \$4.29.

800 g is 8×100 g; so, the cost of 100 g of Box C is: $\frac{\$4.29}{8} \div \0.536

- b) Box C has the lowest unit price. It is the best buy.

7. Which is the best buy? Show your work.



8. **Assessment Focus** Sue wants to buy tea.

The brand that she buys comes in 2 sizes.

- a) Use unit rates.

Which box of tea bags is the better buy?

- b) How could Sue determine the better buy without using unit rates? Explain.

- c) Why might Sue not want to purchase the better buy?



9. **Take It Further** A 400-g package of Grandma's Cookies has 18 cookies and costs \$2.49.

A 700-g package of Dee's Delights has 12 cookies and costs \$3.99.

- a) Which unit would you use to determine the better buy?

Explain why you chose that unit.

- b) Determine the unit price of each brand of cookie.

- c) Which brand is the better buy? Explain.

In Your Own Words

What is a unit rate?

How can you use unit rates to determine the better buy?

Use examples in your explanation.