Practice

1. Determine each unit rate.
   a) 50 goals scored in 25 games
   b) $400 earned in 40 h
   c) $6.00 for 12 oranges
   d) 770 km travelled in 7 h

2. Determine each unit rate.
   a) $5.00 for 10 CDs
   b) $2.37 for 3 kg of apples
   c) 9 kg lost in 6 weeks
   d) 22 km hiked in 5 h

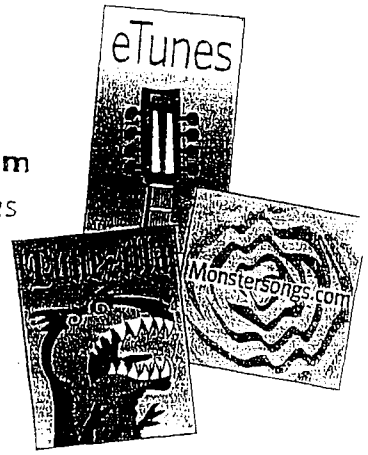
3. Twelve hundred litres of water were pumped out of a flooded basement in 8 h.
   What was the unit rate of outflow?

4. 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.

5. 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.

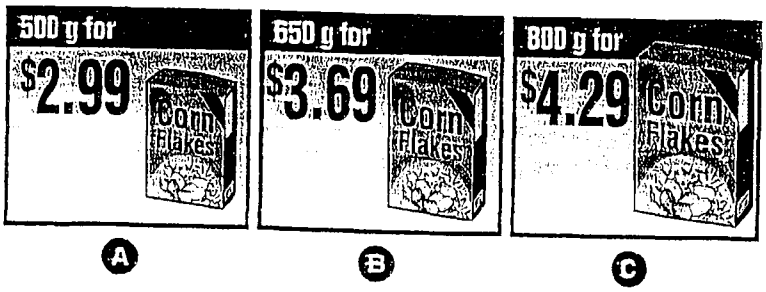


6. A 12-pack of pop costs $2.99.
   The same pop costs $0.75 per can from a vending machine.
   Is this a fair price? Explain.

We can use unit rates to determine the best buy.

Example

Cereal comes in 3 sizes.



a) Calculate the unit price for each box.
b) Which box is the best buy? Explain.

Rates

A rate compares quantities that are measured in different units.

Example: Calculate a Unit Rate

A car travelled 348 km in 4 h. Write a **unit rate** that describes how fast the car was travelling.

Solution

$$\frac{348 \text{ km}}{4 \text{ h}}$$

$$= \frac{87 \text{ km}}{1 \text{ h}}$$

The car was travelling 87 km/h.

Practise

1. Calculate each unit rate.
   a) A bus travelled 288 km in 3 h.

   b) Sumi swam 50 m in 40 s.

   c) Franco ran 100 m in 20 s.

2. Calculate each unit rate.
   a) Four lemons cost $1.40.

   b) Five pairs of socks cost $12.50.

   c) Six bagels cost $7.50.

3. Calculate each unit rate.
   a) A breakfast cereal costs $3.75 for 750 g.

   b) An oatmeal raisin cookie recipe calls for 375 mL of raisins to make 30 cookies.

   c) A printer prints 45 pages in 5 min.

4. Which brand of honey is a better buy?
   Brand A: $2.44 for 250 g
   Brand B: $4.92 for 500 g

5. Which brand of maple syrup is a better buy?
   Brand A: $12.75 for 375 mL
   Brand B: $15.25 for 500 mL

6. Julie and Murray work at different coffee shops. Julie works at Starnile and earns $35 for 4 h of work. Murray works at Brew On and earns $49.50 for 6 h of work. Which coffee shop offers better pay?