

§8-1 Comparing + Interpreting Rates

Example 1 (p453)

Local Butcher

12 kg
for \$42.89

Local Supermarket

\$1.49/lb
1 kg = 2.2 lbs

How much is a 12kg turkey?

OR

$$\frac{x \text{ lb}}{12 \text{ kg}} = \frac{2.2 \text{ lb}}{1 \text{ kg}}$$

$$x = 26.4 \text{ lbs}$$

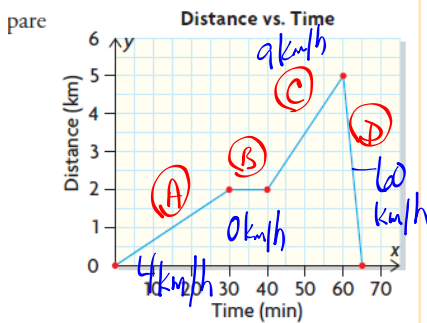
$$\frac{\$x}{26.4 \text{ lb}} = \frac{\$1.49}{1 \text{ lb}}$$

$$x = \$39.34$$

$$12 \text{ kg} \left(\frac{2.2 \text{ lbs}}{1 \text{ kg}} \right) \left(\frac{\$1.49}{1 \text{ lb}} \right)$$

\$39.34 ← Better price for a 12kg turkey

Example 2 (p254)



Section A: 2 km / 0.5 h
rate is 2 km / 30 min
(slope is the rate)

unit rate:
 $\frac{2 \text{ km}}{0.5 \text{ h}} = 4 \text{ km/h}$

C: 3 km / 20 min (rate)
3 km / 0.33 h (rate)
9 km/h (unit rate)

D: -5 km / 5 min (rate)
-5 km / 0.0833 h (unit rate)
-60 km/h (rate)

Example 3 (p456)

	<u>Total Distance</u>	
Stage 1	645 km	48.0 L
Stage 2	1037 km	32.1 L

look at L/km :

Stage 1: $\frac{48.0 \text{ L}}{645 \text{ km}} = 0.0744 \text{ L/km}$ (more fuel efficient (less fuel per km))

Stage 2: $\frac{32.1 \text{ L}}{1037 \text{ km} - 645 \text{ km}} = \frac{32.1 \text{ L}}{392 \text{ km}} = 0.0819 \text{ L/km}$

88-2 Solving Problems Involving Rates

Example 3 (p464)

$$x \text{ boxes} = 180 \text{ people} \left(\frac{2.5 \text{ squares}}{\text{person}} \right) \left(\frac{1 \text{ box}}{24 \text{ squares}} \right)$$

$$\frac{(180 \times 2.5 \times 1)}{(1 \times 24)}$$

$x \text{ boxes} = 18.75 \text{ boxes}$

$\approx 19 \text{ boxes}$

↑ need to buy 19 boxes of squares.

Example 4 (p464)

Amelia

6 km/h

2 h → 454 cal

3 h → ??

$$x \text{ cal} = 3 \text{ h} \left(\frac{454 \text{ cal}}{2 \text{ h}} \right)$$

$x \text{ cal} = 681 \text{ cal}$

Bruce

4 km/h

62 cal → 30 min 0.5 h

How much longer will Bruce have to walk in order to burn same calories?

$$x \text{ h} = 681 \text{ cal} \left(\frac{0.5 \text{ h}}{62 \text{ cal}} \right)$$

$x = 5.5 \text{ h}$

Since Amelia walks for 3h, Bruce needs to walk 2.5h more to burn the same amount of calories.

TO DO

p459/8, 13-15

p466/8, 11, 15

+ Mid Chapter Review