

Answer the following questions.

- 1 9 kg of apples cost \$24.75. Calculate the cost of 5 kg of apples.

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- 2 3 kg of mince cost \$32.85. Calculate the cost of 7 kg of mince.

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- 3 When Lizzie drove from home to town at an average of 48 kph, it took her 21 minutes. Her mum drove from home to town at an average of 42 kph. How long did it take her?

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- 4 When Lizzie drove from home to the beach at an average of 72 kph, it took her 28 minutes. Her mum did the same trip in 24 minutes. What was her mum's average speed?

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- 5 An ant weighs 0.0003 kg and can lift 0.015 kg. Adam weighs 72 kg. If he could lift the equivalent of an ant, what weight could he lift?

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- 6 The average person speaks for just 10 minutes per day. How long does the average person speak in one hour?

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- 7 A snail can crawl 49 m in one hour. How far can it crawl in one minute?

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- 8 In the USA, 2.5 cans of spam are consumed per second. How many cans of spam are consumed in the USA in one hour?

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## walkernaths

- 9 An average hamburger weighs about 100 g and costs \$3.50. An average car weighs 1100 kg. How much would 1100 kg (one car weight) of hamburgers cost?
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- 10 The scale on a map states 1 cm : 500 m. If a track is 4.5 cm long on the map, how long is the real track?
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- 11 A 1.5 mm tall flea can jump 200 mm. Whina is 1.6 m tall. If she could jump the equivalent of a flea, how high could she jump?
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- 12 An impulse travels along a nerve at 274 kph (274 000 m per 3600 s). How long does an impulse take to travel the 1.5 m from Siale's toe to her head?
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- 13 The average person sheds 18.13 kg of skin over their 70-year life. How much skin does the average person shed in a year?
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- 14 It took five painters  $17\frac{1}{2}$  days to paint a house. How long should it take a team of seven painters to do the same job?
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- 15 A team of six parents makes 480 lamingtons in  $2\frac{1}{2}$  hours. If a team of five parents makes 560 lamingtons, how long should the team take?
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- 16 Another team of four parents took 3 hours to make 600 sandwiches. If a team of five parents worked for  $2\frac{1}{2}$  hours, how many sandwiches should they be able to make?
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# Exchange rates

- The value of the New Zealand dollar changes with time.
- Its value also changes in relation to other currencies.
- Changes in its value are important when calculating the cost of overseas goods or travel.
- You can use the same method as in proportion calculations.

Exchange rates used in the examples and exercises:

$$\begin{aligned} \$NZ1 &= \text{€}0.65 \text{ (euro)} \\ \$NZ1 &= \text{£}0.49 \text{ (pounds sterling)} \\ \$NZ1 &= \$US0.74 \text{ (US dollar)} \end{aligned}$$

**Example 1:** Michelle takes \$3000 spending money with her to the United States. How many \$US is that worth?

$$\begin{aligned} \$NZ1 &= \$US0.74 \\ \therefore \$NZ3000 &= \$US0.74 \times \frac{3000}{1} \\ &= \$US2220 \end{aligned}$$

**Example 2:** Ali returns to New Zealand with €8500 earned while working in the Netherlands. How many \$NZ will he get when he banks it?

$$\begin{aligned} \text{€}0.65 &= \$NZ1 \\ \therefore \text{€}8500 &= \$NZ1 \times \frac{8500}{0.65} \\ &= \$NZ13\,076.92 \end{aligned}$$

Solve the following exchange rate problems.

1 Convert \$NZ2500 to €.

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2 Convert \$NZ2500 to \$US.

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3 Convert \$NZ2500 to £.

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4 Convert €150 to \$NZ.

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5 Convert \$US600 to \$NZ.

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6 Convert £15 to \$NZ.

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