

# Ratio and proportion problems

1 Whitney buys 6 cans of lemonade for £3

a) How much do 12 cans cost?

b) How much do 3 cans cost?

c) How much do 15 cans cost?



2 The ratio of red to green grapes in a bowl is 3:1

a) Explain what this means.

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b) There are 12 more red grapes than green grapes.  
What is the total number of grapes in the bowl?

3 Amir is making some chocolate chip biscuits.

He has this list of ingredients to make 6 biscuits.

**Chocolate chip biscuits (makes 6)**

120 g butter

72 g sugar

180 g plain flour

60 g chocolate chips

a) How much of each ingredient does Amir need to make 2 biscuits?

butter  g

plain flour  g

sugar  g

chocolate chips  g

b) How much of each ingredient does Amir need to make 10 biscuits?

butter  g

plain flour  g

sugar  g

chocolate chips  g

c) Amir has 240 g of chocolate chips.

What is the maximum number of biscuits he can make?



4 Dexter has some 20p and 50p coins in a jar.  
For every three 20p coins he has one 50p coin.  
There are 12 coins in the jar in total.  
How much money is in the jar?



5 A drink is made using 3 parts orange juice to 2 parts lemonade.  
Esther makes 1.2 litres of this drink.  
How much orange juice does she need?

 ml

6 Two shops sell the same cereal but in different-sized boxes.

<b>Shop A</b> 500 g of cornflakes £2.10	<b>Shop B</b> 750 g of cornflakes £3.30
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Which shop is better value for money? Shop \_\_\_\_\_

Explain why.



7 Dora draws two similar rectangles.

The length and width of both rectangles are even numbers.  
What is the largest possible area for the small rectangle?

 cm<sup>2</sup>

8 Aisha has two boxes of sweets.

- In the first box, the ratio of red sweets to green sweets is 3 : 1
- In the second box, for every 2 orange sweets there are 3 yellow sweets.
- There is the same number of sweets in each box.
- There are 12 yellow sweets in the second box.

How many sweets are in the first box?

