

Ratio, Proportion and Rates of Change **Maths Activities**

## A01 Using and Applying

Share £450 in the ratio  
2:5:8

1

The audience at a concert is made up of men, women and children in the ratio 2:4:3. There are 414 people in the audience.

2

**How many are women?**

Louise is making cupcakes. She uses 250g of flour to make 10 cupcakes.

3

**How much flour would she need to make 8 cupcakes?**

## A02 Reasoning and Fluency

A chocolate cake uses the following ingredients:

250g flour  
150g butter  
75g cocoa  
125g of sugar

**What fraction of the cake does each ingredient make up? Write your answer in its simplest form.**

1

Sam says that if it takes three hours for 3 people to make 60 sandwiches, then it would take 1 hour for 1 person to make 20 sandwiches.

2

**Explain why Sam's explanation is incorrect.**

A supermarket has the following offers:

A 6 pack of coke £3.60  
Individual cans of coke 50p.

3

**Which is the cheapest way to buy 12 cans of coke? Show your working out.**

## A03 Problem Solving

Steve and Lynn share some money in the ratio 7:5. Lynn receives £18 less than Steve.

**How much money was shared altogether?**

1

The books on a shelf are a mixture of stories, non-fiction and poems in the ratio of 3:5:2.

2

**If there are 150 non-fiction books, how many books are on the shelf altogether?**

Patrick is making a drink which uses orange juice, lemonade and water in the ratio 7:5:8.

3

**If Patrick has 330ml of orange juice, 300ml of lemonade and 500ml of water, does he have enough to make 1 litre of the drink?**

Ratio, Proportion and Rates of Change **Maths Activities Answers**

## A01 Using and Applying

$2 + 5 + 8 = 15$

$450 \div 15 = 30$

**£60:£150:£240**

1

$2 + 4 + 3 = 9$

$414 \div 9 = 46$

$46 \times 4 = 184$  women

2

1 cupcake:

$250\text{g} \div 10 = 25\text{g}$

$25\text{g} \times 8 = 200\text{g}$

3

## A02 Reasoning and Fluency

$\frac{50}{600} = \frac{5}{12}$

$\frac{150}{600} = \frac{1}{4}$

$\frac{75}{600} = \frac{1}{8}$

$\frac{125}{600} = \frac{5}{24}$

1

It would take 3 people  
1 hour to make 20  
sandwiches.1 person would only be able  
to make  $6\frac{2}{3}$  sandwiches in  
1 hour.

2

$£3.60 \times 2 = £7.20$

$£0.50 \times 12 = £6.00$

The cheapest way to buy 12  
cans of coke is to buy 12  
individual cans.

3

## A03 Problem Solving

$7 - 5 = 2$

$£18 \div 2 = £9$

$7 \times £9 = £63$

$5 \times £9 = £45$

$£63 + £45 = £108$

1

$150 \div 5 = 30$

$30 \times 3 = 90$  stories

$30 \times 5 = 150$  non-fiction

$30 \times 2 = 60$  poems

300 books are on the shelf.

2

$7 + 5 + 8 = 20$

$1000\text{ml} \div 20 = 50\text{ml}$

$7 \times 50 = 350\text{ml}$

$5 \times 50 = 250\text{ml}$

$8 \times 50 = 400\text{ml}$

No, to make 1 litre of drink,  
he needs 20ml more  
orange juice.

3