

1. Jack and Jill share £40 in the ratio 3:2 respectively.
How much does each of them receive?

2. Sam and Tom share some money in the ratio 4:3.
If Sam receives £24, how much does Tom receive?

3. Alan, Bill and Colin share £24 in the ratio 5:3:2.
How much does each boy receive?

4. On a school trip, the ratio of teachers to students
was 1:6. If there were 140 people altogether on the
trip, how many were teachers?

5. A piece of wood 27cm long is cut into 2 pieces
in the ratio 7:2. How long is each piece?

6. Orange Fizz is made from Lemonade and Fruit Juice
in the ratio 7:3. If some Orange Fizz contains
35cl of Lemonade, how much Fruit Juice should it contain?

7. A pizza has cheese, topping and dough in the
ratio 2:3:5. If it has 40g of cheese, how much
topping and how much dough should it have?

8. Ingredients for poached peaches for 6 people

12 peaches

1400 ml water

130g sugar

What ingredients are required to cater for 9 people?

9. Ingredients for 500 ml of custard

400 ml milk

3 eggs

50g sugar

2 teaspoons of cornflour

Work out the ingredients required for 2000 ml of custard

10. Ingredients for 4 yorkshire puddings

60 ml milk

100 ml water

80g flour

1 teaspoon salt

2 eggs

Work out the ingredients for 10 yorkshire puddings

SIMPLE RATIO AND RECIPESEXERCISE

1. £40 represents $3+2 = 5$ shares

$$1 \text{ share} = \frac{£40}{5} = £8$$

Jack receives $3 \times £8 = £24$

Jill receives $2 \times £8 = £16$

2. Sam receives £24 which is 4 shares

$$\text{So } 1 \text{ share} = \frac{£24}{4} = £6$$

Tom receives 3 shares = $3 \times £6 = £18$

3. £24 represents $5+3+2 = 10$ shares

$$\text{So } 1 \text{ share} = \frac{£24}{10} = £2.40$$

Alan receives $5 \times £2.40 = £12.00$

Bill receives $3 \times £2.40 = £7.20$

Colin receives $2 \times £2.40 = £4.80$

4. 1 part teachers, 6 parts students

$$1+6 = 7 \text{ parts altogether}$$

$$7 \text{ parts} = 140 \text{ people}$$

$$1 \text{ part} = \frac{140}{7} = 20 \text{ people}$$

1 part teachers so 20 teachers

5. 27 cm represents $7+2 = 9$ parts

$$1 \text{ part} = \frac{27 \text{ cm}}{9} = 3 \text{ cm}$$

$$\text{Pieces are } 2 \times 3 = 6 \text{ cm}$$

$$\text{and } 7 \times 3 = 21 \text{ cm}$$

6. Lemonade = 7 parts

$$\text{so } 7 \text{ parts} = 35 \text{ cl}$$

$$\text{so } 1 \text{ part} = \frac{35 \text{ cl}}{7} = 5 \text{ cl}$$

Fruit Juice = 3 parts

$$\text{so Fruit Juice} = 3 \times 5 = 15 \text{ cl}$$

7. Cheese = 2 parts

$$\text{so } 2 \text{ parts} = 40 \text{ g}$$

$$\text{so } 1 \text{ part} = \frac{40 \text{ g}}{2} = 20 \text{ g}$$

$$\text{topping} = 3 \text{ parts} = 3 \times 20 = 60 \text{ g}$$

$$\text{dough} = 5 \text{ parts} = 5 \times 20 = 100 \text{ g}$$

8. for 1 person $\div 6$

then for 9 people $\times 9$

$$\text{so } \times \frac{9}{6} \quad \text{which cancels to } \times \frac{3}{2}$$

SIMPLE RATIO AND RECIPES

⑤ EXERCISE

8.
cont

$$\begin{array}{lcl} \text{peaches} & 12 \div 2 = 6 & 6 \times 3 = 18 \text{ peaches} \\ \text{water} & 1400 \div 2 = 700 & 700 \times 3 = 2100 \text{ ml water} \\ \text{sugar} & 130 \div 2 = 65 & 65 \times 3 = 195 \text{g sugar} \end{array}$$

8 Alternative method: 9 is one and a half lots of 6
so add on half of original quantities

$$12 + 6 = 18 \text{ peaches}$$

$$1400 + 700 = 2100 \text{ ml water}$$

$$130 + 65 = 195 \text{g sugar}$$

9. for 1 ml of custard $\div 500$

then for 2000 ml of custard $\times 2000$

$$\text{so } \times \frac{2000}{500} \text{ which cancels to } \times \frac{4}{1}$$

$$400 \text{ ml milk} \quad 400 \times 4 = 1600 \text{ ml milk}$$

$$3 \text{ eggs} \quad 3 \times 4 = 12 \text{ eggs}$$

$$50 \text{g sugar} \quad 50 \times 4 = 200 \text{g sugar}$$

$$2 \text{ teaspoons cornflour} \quad 2 \times 4 = 8 \text{ teaspoons cornflour}$$

Alternatively, we could realise that 2000 ml is simply 4 times the original 500 ml, and so multiply all the original quantities by 4.

SIMPLE RATIO AND RECIPES

EXERCISE

10. for 1 yorkshire pudding $\div 4$

then for 10 yorkshire puddings $\times 10$

so $\times \frac{10}{4}$ which cancels to $\times \frac{5}{2}$

milk $60 \div 2 = 30$ $30 \times 5 = 150$ ml milk

water $100 \div 2 = 50$ $50 \times 5 = 250$ ml water

flour $80 \div 2 = 40$ $40 \times 5 = 200$ g flour

salt $1 \div 2 = \frac{1}{2}$ $\frac{1}{2} \times 5 = 2\frac{1}{2}$ teaspoons salt

eggs $2 \div 2 = 1$ $1 \times 5 = 5$ eggs

Alternatively, we could realise that 10 is two and a half lots of 4. We could double the original quantities and then add half of the original quantities.

60ml milk $120 + 30 = 150$ ml milk

100ml water $200 + 50 = 250$ ml water

80g flour $160 + 40 = 200$ g flour

1 teaspoon salt $2 + \frac{1}{2} = 2\frac{1}{2}$ teaspoons salt

2 eggs $4 + 1 = 5$ eggs

Again, both methods should give same answers.