

1 Simplifying ratios

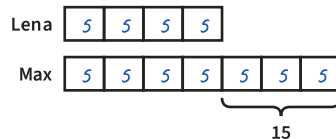
- a) Write shaded : white in its simplest form.
b) Write 40 cm : 1 m in the form 1 : n.



a) $6 : 9 = 2 : 3$
b) $40 : 100 = 1 : 2.5$

2 Sharing in a ratio

- a) Share £90 in the ratio 1 : 3 : 5.
b) Lena and Max share sweets in the ratio 4 : 7. Max gets 15 more than Lena. How many sweets are there?



a) $90 \div 9 = 10$: £10, £30, £50
b) 3 parts = 15, 1 part = 5: $11 \times 5 = 55$

3 Ratios and fractions

- a) In a choir, sopranos : altos = 5 : 3. What fraction of the choir are altos?
b) In a pot, $\frac{1}{4}$ of the pencils are red, $\frac{3}{8}$ are blue and the rest are green. Write red : blue : green in its simplest form.

a) $5 + 3 = 8$ parts: $\frac{3}{8}$
b) $\frac{2}{8} : \frac{3}{8} : \frac{3}{8} = 2 : 3 : 3$

4 Finding a missing amount

A nursery needs at least 1 adult for every 4 children.

- a) There are 7 adults. What is the greatest number of children?
b) There are 30 children. How many adults are needed?

Adults	1	7	8
Children	4	28	30

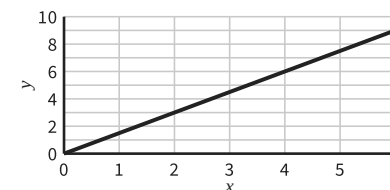
a) $7 \times 4 = 28$
b) $30 \div 4 = 7.5$, so 8 adults

Ratio and proportion revision mat answers

Foundation A

5 Ratios and linear functions

- a) Write $x : y$ in its simplest form.
b) Write an equation for y in terms of x .



a) $2 : 3$ b) $y = 1.5x$

6 Direct proportion: scaling

- a) How much stock is needed for 10 people?
b) Kai has 1.5 kg of carrots. How many people can he make soup for?

Soup for 4 people
600 g carrots · 2 onions · 900 ml stock

a) $900 \div 4 = 225$, $225 \times 10 = 2250$ ml
b) $600 \div 4 = 150$ g each, $1500 \div 150 = 10$

7 Direct proportion: best buys

Three bottles of the same washing up liquid.

- a) Which is better value, A or B?
b) Is C better value than B? Show how you decide.

A 1.2 litres
£4.50

B 2 litres
£7.20

C 750 ml
£2.85

a) A £3.75, B £3.60 a litre: B
b) C is £3.80 a litre: no

8 Combining ratios

On a farm, sheep : cows = 5 : 2 and cows : goats = 3 : 4.

- a) Write sheep : cows : goats.
b) There are 24 goats. How many sheep are there?

	Sheep	Cows	Goats
sheep : cows	5	2	
cows : goats		3	4
All three	15	6	8

a) $15 : 6$ and $6 : 8$, so $15 : 6 : 8$
b) $24 \div 8 = 3$, $15 \times 3 = 45$