

11+ Maths Practice Paper

Year 5 · Intermediate

Lesson 4.2: Sharing by ratio

Read this with your child:

1. This paper has **24 questions** in two parts. Work through them in order. The questions get harder as you go.
2. **Part 1** is multiple choice. Choose **one** answer, A, B, C, D or E, and mark it on the separate answer sheet by drawing a firm line through the box next to its letter. If you change your mind, rub the line out completely and mark your new answer.
3. **Part 2** asks you to write your answer. Write it in the boxes on the answer sheet, **one digit in each box**, starting from the left.
4. If a question is hard, leave it and come back to it at the end.
5. You may use rough paper for working out. You may **not** use a calculator.
6. Suggested time: **30 minutes**.

The answer sheet is after the questions. The answers, with a short explanation of each, are at the back for a parent to mark with.

These are original practice questions written by Elite Learners in the style of 11+ entrance tests. They are not produced by, or connected with, GL Assessment or Cambridge University Press & Assessment (CEM).

Example

Tom and Amy share 20 sweets in the ratio 2 : 3.

How many sweets does Amy get?

A 10

B 4

C 8

D 15

E 12

Answer: E $2 + 3 = 5$ parts. $20 \div 5 = 4$ for one part. Amy has 3 parts: $3 \times 4 = 12$.

The answer, E, has already been marked on your answer sheet.

Now turn over and start Part 1.

Part 1: Multiple choice

1

Pencils and pens in a pot are in the ratio 5 : 2.

What is the ratio of pens to pencils?

A 5 : 2

B 2 : 7

C 2 : 5

D 7 : 2

E 5 : 7

2

Juice, water and ice are mixed in the ratio 2 : 5 : 1.

How many parts are there altogether?

A 3

B 7

C 10

D 8

E 5

3

Share £32 in the ratio 3 : 5.

How much is the smaller share?

A £12

B £20

C £15

D £16

E £4

4

The ratio of boys to girls in a class is 4 : 5.

What fraction of the class are girls?

A $\frac{5}{8}$

B $\frac{5}{9}$

C $\frac{1}{9}$

D $\frac{4}{5}$

E $\frac{4}{9}$

5

Cats and dogs in a street are in the ratio 3 : 4.

There are 12 cats.

How many dogs are there?

A 16

B 9

C 28

D 21

E 13

6

600 g of sweets are shared in the ratio 1 : 5.

How much is the larger share?

A 400 g

B 300 g

C 120 g

D 100 g

E 500 g

7

Zara and Omar share some stickers in the ratio 2 : 7.

Zara gets 10 stickers.

How many stickers are there altogether?

A 17

B 19

C 45

D 90

E 35

8

A drink is made from orange juice and lemonade in the ratio 2 : 3.

How much orange juice is in 500 ml of the drink?

A 100 ml

B 200 ml

C 250 ml

D 400 ml

E 300 ml

9

Ava and Ben share £54 in the ratio 4 : 5.

How much does Ben get?

A £27

B £45

C £24

D £30

E £6

10

In a bag of counters, $\frac{3}{8}$ of the counters are red. The rest are yellow.

What is the ratio of red counters to yellow counters?

A 5 : 3

B 3 : 8

C 3 : 5

D 5 : 8

E 8 : 3

11

72 marbles are shared in the ratio 5 : 3.

How many more marbles are in the larger share than the smaller share?

A 18

B 27

C 2

D 45

E 9

12

A paint mix uses blue paint and white paint in the ratio 2 : 9.

A painter uses 18 litres of white paint.

How much blue paint does the painter use?

A 9 litres

B 4 litres

C 22 litres

D 11 litres

E 2 litres

13

Share £4.80 in the ratio 1 : 3.

How much is the smaller share?

- A** 40p **B** £2.40 **C** £3.60 **D** £1.60 **E** £1.20
-

14

Isla, Raj and Kit share 36 sweets in the ratio 1 : 2 : 3.

How many sweets does Kit get?

- A** 6 **B** 15 **C** 12 **D** 18 **E** 9
-

15

A recipe uses flour and butter in the ratio 5 : 2.

A cook uses 250 g of flour.

How much butter does the cook use?

- A** 350 g **B** 175 g **C** 100 g **D** 50 g **E** 125 g
-

16

At a show, the ratio of adults to children is 2 : 7.

There are 63 people altogether.

How many children are there?

- A** 9 **B** 49 **C** 56 **D** 42 **E** 14
-

17

Mia and Leo share some money in the ratio 3 : 4.

Leo gets £8 more than Mia.

How much does Mia get?

- A** £8 **B** £16 **C** £32 **D** £56 **E** £24
-

18

1000 g of rice is shared in the ratio 3 : 2.

How much is the larger share?

- A** 500 g **B** 400 g **C** 200 g **D** 600 g **E** 300 g

Part 2: Write your answer

19

Ali and Bea share 40 sweets in the ratio 3 : 5.

How many sweets does Bea get?

Write your answer in the boxes on the answer sheet, one digit in each box.

20

Red and blue counters are in the ratio 4 : 7.

There are 28 red counters.

How many blue counters are there?

Write your answer in the boxes on the answer sheet, one digit in each box.

21

Share £90 in the ratio 2 : 3 : 4.

How many pounds is the largest share?

Write your answer in the boxes on the answer sheet, one digit in each box.

22

The ratio of boys to girls at a party is 5 : 6.

There are 30 boys.

How many children are at the party altogether?

Write your answer in the boxes on the answer sheet, one digit in each box.

23

300 ml of paint is shared in the ratio 7 : 3.

How many millilitres are in the larger share?

Write your answer in the boxes on the answer sheet, one digit in each box.

24

Sam and Jo share some stickers in the ratio 2 : 5.

Jo gets 18 more stickers than Sam.

How many stickers are there altogether?

Write your answer in the boxes on the answer sheet, one digit in each box.

Answer sheet

11+ Maths Practice Paper · Year 5 · Lesson 4.2: Sharing by ratio

Name

Draw a firm line through the box next to your answer, like the example.

Part 1: Multiple choice

Ex	A ☐	B ☐	C ☐	D ☐	E ☒
1	A ☐	B ☐	C ☐	D ☐	E ☐
2	A ☐	B ☐	C ☐	D ☐	E ☐
3	A ☐	B ☐	C ☐	D ☐	E ☐
4	A ☐	B ☐	C ☐	D ☐	E ☐
5	A ☐	B ☐	C ☐	D ☐	E ☐
6	A ☐	B ☐	C ☐	D ☐	E ☐
7	A ☐	B ☐	C ☐	D ☐	E ☐
8	A ☐	B ☐	C ☐	D ☐	E ☐
9	A ☐	B ☐	C ☐	D ☐	E ☐
10	A ☐	B ☐	C ☐	D ☐	E ☐
11	A ☐	B ☐	C ☐	D ☐	E ☐
12	A ☐	B ☐	C ☐	D ☐	E ☐
13	A ☐	B ☐	C ☐	D ☐	E ☐
14	A ☐	B ☐	C ☐	D ☐	E ☐
15	A ☐	B ☐	C ☐	D ☐	E ☐
16	A ☐	B ☐	C ☐	D ☐	E ☐
17	A ☐	B ☐	C ☐	D ☐	E ☐
18	A ☐	B ☐	C ☐	D ☐	E ☐

Part 2: Write your answer, one digit in each box

19			
20			
21			
22			
23			
24			

Answers

For a parent to mark with. One mark for each question: the paper is out of 24. Talk through any your child got wrong, using the explanation.

Q	Answer	How to get it
1	C 2 : 5	Pens are named first, so their number comes first: 2 : 5.
2	D 8	Add all three numbers: $2 + 5 + 1 = 8$ parts.
3	A £12	$3 + 5 = 8$ parts. $£32 \div 8 = £4$. The smaller share is 3 parts: $3 \times £4 = £12$.
4	B $\frac{5}{9}$	$4 + 5 = 9$ parts altogether, and girls are 5 of them: $\frac{5}{9}$.
5	A 16	The 12 cats are 3 parts, so one part is $12 \div 3 = 4$. Dogs are 4 parts: $4 \times 4 = 16$.
6	E 500 g	$1 + 5 = 6$ parts. $600 \div 6 = 100$ g. The larger share is 5 parts: $5 \times 100 = 500$ g.
7	C 45	Zara's 10 stickers are 2 parts, so one part is 5. There are $2 + 7 = 9$ parts: $9 \times 5 = 45$.
8	B 200 ml	$2 + 3 = 5$ parts. $500 \div 5 = 100$ ml. Orange juice is 2 parts: $2 \times 100 = 200$ ml.
9	D £30	$4 + 5 = 9$ parts. $£54 \div 9 = £6$. Ben has 5 parts: $5 \times £6 = £30$.
10	C 3 : 5	3 parts out of 8 are red, so $8 - 3 = 5$ parts are yellow. Red to yellow is 3 : 5.
11	A 18	$72 \div 8 = 9$ for one part. The shares are 45 and 27, and $45 - 27 = 18$.
12	B 4 litres	The 18 litres of white are 9 parts, so one part is 2 litres. Blue is 2 parts: $2 \times 2 = 4$ litres.
13	E £1.20	Work in pence: $480p \div 4 = 120p$ for one part. The smaller share is 1 part: 120p, which is £1.20.
14	D 18	$1 + 2 + 3 = 6$ parts. $36 \div 6 = 6$. Kit has 3 parts: $3 \times 6 = 18$.
15	C 100 g	The 250 g of flour is 5 parts, so one part is 50 g. Butter is 2 parts: $2 \times 50 = 100$ g.
16	B 49	$2 + 7 = 9$ parts. $63 \div 9 = 7$. Children are 7 parts: $7 \times 7 = 49$.
17	E £24	The difference is $4 - 3 = 1$ part, so one part is £8. Mia has 3 parts: $3 \times £8 = £24$.
18	D 600 g	$3 + 2 = 5$ parts. $1000 \div 5 = 200$ g. The larger share is 3 parts: $3 \times 200 = 600$ g.
19	25	$3 + 5 = 8$ parts. $40 \div 8 = 5$. Bea has 5 parts: $5 \times 5 = 25$.
20	49	The 28 red counters are 4 parts, so one part is 7. Blue is 7 parts: $7 \times 7 = 49$.
21	40	$2 + 3 + 4 = 9$ parts. $£90 \div 9 = £10$. The largest share is 4 parts: £40.
22	66	The 30 boys are 5 parts, so one part is 6. There are $5 + 6 = 11$ parts: $11 \times 6 = 66$.
23	210	$7 + 3 = 10$ parts. $300 \div 10 = 30$ ml. The larger share is 7 parts: $7 \times 30 = 210$ ml.
24	42	The difference is $5 - 2 = 3$ parts, so one part is $18 \div 3 = 6$. There are $2 + 5 = 7$ parts: $7 \times 6 = 42$.

Score: out of 24