

# 11+ Maths Practice Paper

## Year 4 · Foundation

### Lesson 4.2: Sharing by ratio

#### Read this with your child:

1. This paper has **20 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: **25 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

A bag has 2 red sweets for every 3 green sweets.

**What is the ratio of red sweets to green sweets?**

**A** 5 : 3

**B** 3 : 2

**C** 3 : 5

**D** 2 : 3

**E** 2 : 5

**Answer: D** Red is named first, so its number comes first: 2 : 3.

*The answer, D, has already been marked on your answer sheet.*

**Now turn over and start Part 1.**

## Part 1: Multiple choice

1

On a table there are 3 cups for every 1 plate.

**What is the ratio of plates to cups?**

A 1 : 4

B 1 : 3

C 3 : 1

D 4 : 1

E 3 : 4

2

A bag has 4 red marbles and 5 blue marbles.

**What is the ratio of blue marbles to red marbles?**

A 4 : 5

B 4 : 9

C 5 : 4

D 9 : 5

E 5 : 9

3

Squash and water are mixed in the ratio 1 : 6.

**How many parts are there altogether?**

A 16

B 5

C 6

D 8

E 7

4

In a club there are 3 girls for every 2 boys.

There are 4 boys.

**How many girls are there?**

A 6

B 3

C 8

D 5

E 9

5

Ali and Bea share 12 sweets in the ratio 1 : 2.

**How many sweets does Bea get?**

A 4

B 9

C 10

D 8

E 6

6

Sam and Jo share 20 stickers in the ratio 1 : 4.

**How many stickers does Sam get?**

A 5

B 10

C 4

D 2

E 16

7

A necklace has red beads and blue beads in the ratio 1 : 3.

**What fraction of the beads are red?**

- A**  $\frac{1}{4}$       **B**  $\frac{1}{5}$       **C**  $\frac{1}{2}$       **D**  $\frac{1}{3}$       **E**  $\frac{3}{4}$
- 

8

Mia and Leo share 15 cards in the ratio 2 : 3.

**How many cards does Mia get?**

- A** 5      **B** 9      **C** 10      **D** 7      **E** 6
- 

9

Zara and Omar share £24 in the ratio 1 : 3.

**How much does Omar get?**

- A** £12      **B** £18      **C** £21      **D** £6      **E** £8
- 

10

A cake recipe uses 3 cups of flour for every 1 cup of sugar.

A baker uses 12 cups of flour.

**How many cups of sugar does the baker use?**

- A** 10      **B** 36      **C** 9      **D** 4      **E** 3
- 

11

The ratio of cats to dogs at a rescue centre is 2 : 5.

**What fraction of the animals are dogs?**

- A**  $\frac{1}{5}$       **B**  $\frac{5}{7}$       **C**  $\frac{2}{5}$       **D**  $\frac{2}{7}$       **E**  $\frac{3}{7}$
- 

12

Red apples and green apples in a box are in the ratio 1 : 2.

There are 5 red apples.

**How many apples are there altogether?**

- A** 10      **B** 7      **C** 15      **D** 8      **E** 20
-

13

Two children share 35 marbles in the ratio 3 : 4.

**How many marbles are in the larger share?**

A 20

B 17

C 28

D 15

E 21

14

Tom and Amy share 18 sweets in the ratio 1 : 2.

**How many more sweets does Amy get than Tom?**

A 1

B 9

C 3

D 12

E 6

15

Ben shares £40 between his two children in the ratio 3 : 5.

**How much is the smaller share?**

A £25

B £15

C £20

D £24

E £5

## Part 2: Write your answer

16

Isla and Raj share 21 sweets in the ratio 1 : 2.

**How many sweets are in the larger share?**

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

17

For every 2 red beads on a necklace there are 5 blue beads.

There are 10 red beads.

**How many blue beads are there?**

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

18

Ava and Ben share 28 stickers in the ratio 3 : 4.

**How many stickers does Ava get?**

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

19

The ratio of boys to girls in a club is 2 : 3.

There are 6 boys.

**How many children are in the club altogether?**

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

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20

Zara and Omar share 45 cards in the ratio 4 : 5.

**How many cards does Omar get?**

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

# Answer sheet

11+ Maths Practice Paper · Year 4 · 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

|           |                            |                            |                            |                                       |                            |
|-----------|----------------------------|----------------------------|----------------------------|---------------------------------------|----------------------------|
| <b>Ex</b> | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input checked="" type="checkbox"/> | E <input type="checkbox"/> |
| <b>1</b>  | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input type="checkbox"/>            | E <input type="checkbox"/> |
| <b>2</b>  | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input type="checkbox"/>            | E <input type="checkbox"/> |
| <b>3</b>  | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input type="checkbox"/>            | E <input type="checkbox"/> |
| <b>4</b>  | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input type="checkbox"/>            | E <input type="checkbox"/> |
| <b>5</b>  | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input type="checkbox"/>            | E <input type="checkbox"/> |
| <b>6</b>  | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input type="checkbox"/>            | E <input type="checkbox"/> |
| <b>7</b>  | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input type="checkbox"/>            | E <input type="checkbox"/> |
| <b>8</b>  | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input type="checkbox"/>            | E <input type="checkbox"/> |
| <b>9</b>  | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input type="checkbox"/>            | E <input type="checkbox"/> |
| <b>10</b> | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input type="checkbox"/>            | E <input type="checkbox"/> |
| <b>11</b> | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input type="checkbox"/>            | E <input type="checkbox"/> |
| <b>12</b> | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input type="checkbox"/>            | E <input type="checkbox"/> |
| <b>13</b> | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input type="checkbox"/>            | E <input type="checkbox"/> |
| <b>14</b> | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input type="checkbox"/>            | E <input type="checkbox"/> |
| <b>15</b> | A <input type="checkbox"/> | B <input type="checkbox"/> | C <input type="checkbox"/> | D <input type="checkbox"/>            | E <input type="checkbox"/> |

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

|           |                      |                      |
|-----------|----------------------|----------------------|
| <b>16</b> | <input type="text"/> | <input type="text"/> |
| <b>17</b> | <input type="text"/> | <input type="text"/> |
| <b>18</b> | <input type="text"/> | <input type="text"/> |
| <b>19</b> | <input type="text"/> | <input type="text"/> |
| <b>20</b> | <input type="text"/> | <input type="text"/> |

# Answers

For a parent to mark with. One mark for each question: the paper is out of 20. Talk through any your child got wrong, using the explanation.

| Q  | Answer          | How to get it                                                                                   |
|----|-----------------|-------------------------------------------------------------------------------------------------|
| 1  | B 1 : 3         | Plates are named first, so their number comes first: 1 : 3.                                     |
| 2  | C 5 : 4         | Blue is named first: 5 blue to 4 red is 5 : 4.                                                  |
| 3  | E 7             | Add the numbers in the ratio: $1 + 6 = 7$ parts.                                                |
| 4  | A 6             | 4 boys is 2 groups of 2 boys. Each group has 3 girls: $2 \times 3 = 6$ .                        |
| 5  | D 8             | $1 + 2 = 3$ parts. $12 \div 3 = 4$ for one part. Bea has 2 parts: $2 \times 4 = 8$ .            |
| 6  | C 4             | $1 + 4 = 5$ parts. $20 \div 5 = 4$ , and Sam has 1 part: 4.                                     |
| 7  | A $\frac{1}{4}$ | $1 + 3 = 4$ parts altogether, and red is 1 of them: $\frac{1}{4}$ .                             |
| 8  | E 6             | $2 + 3 = 5$ parts. $15 \div 5 = 3$ for one part. Mia has 2 parts: $2 \times 3 = 6$ .            |
| 9  | B £18           | $1 + 3 = 4$ parts. $£24 \div 4 = £6$ . Omar has 3 parts: $3 \times £6 = £18$ .                  |
| 10 | D 4             | 12 cups of flour is 4 lots of 3 cups. Each lot needs 1 cup of sugar: 4 cups.                    |
| 11 | B $\frac{5}{7}$ | $2 + 5 = 7$ parts altogether, and dogs are 5 of them: $\frac{5}{7}$ .                           |
| 12 | C 15            | The 5 red apples are 1 part, so one part is 5. There are $1 + 2 = 3$ parts: $3 \times 5 = 15$ . |
| 13 | A 20            | $3 + 4 = 7$ parts. $35 \div 7 = 5$ . The larger share is 4 parts: $4 \times 5 = 20$ .           |
| 14 | E 6             | $18 \div 3 = 6$ for one part. Tom gets 6 and Amy gets 12, so Amy gets $12 - 6 = 6$ more.        |
| 15 | B £15           | $3 + 5 = 8$ parts. $£40 \div 8 = £5$ . The smaller share is 3 parts: $3 \times £5 = £15$ .      |
| 16 | 14              | $1 + 2 = 3$ parts. $21 \div 3 = 7$ . The larger share is 2 parts: $2 \times 7 = 14$ .           |
| 17 | 25              | 10 red beads is 5 groups of 2. Each group has 5 blue beads: $5 \times 5 = 25$ .                 |
| 18 | 12              | $3 + 4 = 7$ parts. $28 \div 7 = 4$ . Ava has 3 parts: $3 \times 4 = 12$ .                       |
| 19 | 15              | The 6 boys are 2 parts, so one part is 3. There are $2 + 3 = 5$ parts: $5 \times 3 = 15$ .      |
| 20 | 25              | $4 + 5 = 9$ parts. $45 \div 9 = 5$ . Omar has 5 parts: $5 \times 5 = 25$ .                      |

Score: ..... out of 20