

11+ Maths Practice Paper

Year 6 · Advanced

Lesson 4.2: Sharing by ratio

Read this with your child:

1. This paper has **27 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: **35 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

Share £60 in the ratio 1 : 2 : 3.

How much is the largest share?

A £18

B £36

C £20

D £30

E £10

Answer: D $1 + 2 + 3 = 6$ parts. $£60 \div 6 = £10$. The largest share is 3 parts: £30.

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

Now turn over and start Part 1.

Part 1: Multiple choice

1

A box has 4 blue pens for every 7 green pens.

What is the ratio of green pens to blue pens?

A 7 : 4

B 7 : 11

C 4 : 7

D 4 : 11

E 11 : 4

2

Share 56 in the ratio 3 : 5.

What is the larger share?

A 40

B 28

C 21

D 7

E 35

3

In a school, $\frac{5}{12}$ of the pupils walk to school. The rest come by car.

What is the ratio of pupils who walk to pupils who come by car?

A 12 : 5

B 5 : 7

C 5 : 12

D 7 : 12

E 7 : 5

4

Share £6.30 in the ratio 2 : 5.

How much is the smaller share?

A £3.15

B 90p

C £1.80

D £2.52

E £4.50

5

Red, white and blue flags are in the ratio 2 : 3 : 5.

There are 80 flags altogether.

How many white flags are there?

A 40

B 16

C 27

D 30

E 24

6

The ratio of boys to girls in a choir is 3 : 5.

There are 12 more girls than boys.

How many children are in the choir altogether?

A 30

B 48

C 18

D 96

E 60

7

A jar holds only red beads and blue beads. In the jar, $\frac{3}{10}$ of the beads are red.

What is the ratio of blue beads to red beads?

A 7 : 10

B 10 : 3

C 3 : 7

D 7 : 3

E 3 : 10

8

Ali, Ben and Cat share some sweets in the ratio 2 : 3 : 4.

Ben gets 15 sweets.

How many sweets are there altogether?

A 30

B 20

C 45

D 135

E 24

9

750 g of flour is shared in the ratio 2 : 3.

How much is the larger share?

A 450 g

B 375 g

C 250 g

D 500 g

E 300 g

10

Mia and Leo share £56 in the ratio 3 : 5.

Then Leo gives Mia £7.

How much money does Mia have now?

A £35

B £14

C £27

D £28

E £21

11

In a car park, the ratio of cars to vans is 7 : 2.

There are 45 vehicles altogether.

How many more cars are there than vans?

A 5

B 25

C 10

D 30

E 35

12

Tom and Amy share some money in the ratio 4 : 9.

Amy gets £35 more than Tom.

How much does Tom get?

A £7

B £63

C £28

D £140

E £35

13

A drink is made with 1 part cordial to 6 parts water.

How much cordial is in 1400 ml of the drink?

- A** 200 ml **B** 1200 ml **C** 700 ml **D** 140 ml **E** 280 ml
-

14

Share £10 between three children in the ratio 1 : 2 : 2.

How much does each of the two larger shares get?

- A** £2 **B** £5 **C** £2.50 **D** £3 **E** £4
-

15

Isla and Raj share some sweets in the ratio 5 : 3.

Isla gets 30 sweets.

How many sweets does Raj get?

- A** 18 **B** 28 **C** 50 **D** 48 **E** 6
-

16

84 is shared in the ratio 1 : 2 : 4.

What is the difference between the largest share and the smallest share?

- A** 48 **B** 24 **C** 12 **D** 36 **E** 3
-

17

Red, green and blue counters are in the ratio 3 : 1 : 4.

There are 12 green counters.

How many counters are there altogether?

- A** 48 **B** 96 **C** 36 **D** 108 **E** 24
-

18

Share £7.20 in the ratio 5 : 3 : 1.

How much is the largest share?

- A** £3.60 **B** £2.40 **C** £1.44 **D** 80p **E** £4
-

19

Two numbers are in the ratio 3 : 8. They add up to 66.

What is the larger number?

A 44

B 18

C 48

D 30

E 33

20

For every 3 stickers Jo has, Sam has 4 stickers.

Together they have 63 stickers.

How many stickers does Sam have?

A 27

B 48

C 9

D 21

E 36

Part 2: Write your answer

21

96 sweets are shared in the ratio 5 : 7.

How many sweets are in the larger 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 camp is 5 : 4.

There are 25 boys.

How many children are at the camp altogether?

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

23

Share £132 in the ratio 1 : 3 : 7.

How many pounds is the largest share?

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

24

Ali and Bea share some marbles in the ratio 2 : 7.

Bea gets 35 more marbles than Ali.

How many marbles are there altogether?

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

25

Red and blue counters are in the ratio 3 : 5.

There are 24 more blue counters than red counters.

How many blue counters are there?

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

26

Three friends share £240 in the ratio 3 : 4 : 5.

How many pounds is the middle share?

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

27

Tom and Amy share some sweets in the ratio 4 : 5.

Amy gives Tom 3 sweets. Now they have the same number.

How many sweets were there altogether?

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

Answer sheet

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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 ☐
19	A ☐	B ☐	C ☐	D ☐	E ☐
20	A ☐	B ☐	C ☐	D ☐	E ☐

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

21		
22		
23		
24		
25		
26		
27		

Answers

For a parent to mark with. One mark for each question: the paper is out of 27. Talk through any your child got wrong, using the explanation.

Q	Answer	How to get it
1	A 7 : 4	Green is named first, so its number comes first: 7 : 4.
2	E 35	$3 + 5 = 8$ parts. $56 \div 8 = 7$. The larger share is 5 parts: $5 \times 7 = 35$.
3	B 5 : 7	5 parts out of 12 walk, so $12 - 5 = 7$ parts come by car. Walk to car is 5 : 7.
4	C £1.80	Work in pence: $630p \div 7 = 90p$ for one part. The smaller share is 2 parts: $180p$, which is £1.80.
5	E 24	$2 + 3 + 5 = 10$ parts. $80 \div 10 = 8$. White is 3 parts: $3 \times 8 = 24$.
6	B 48	The difference is $5 - 3 = 2$ parts, so one part is $12 \div 2 = 6$. There are 8 parts: $8 \times 6 = 48$.
7	D 7 : 3	3 parts out of 10 are red, so 7 parts are blue. Blue is named first: 7 : 3.
8	C 45	Ben's 15 sweets are 3 parts, so one part is 5. There are $2 + 3 + 4 = 9$ parts: $9 \times 5 = 45$.
9	A 450 g	$2 + 3 = 5$ parts. $750 \div 5 = 150$ g. The larger share is 3 parts: $3 \times 150 = 450$ g.
10	D £28	$£56 \div 8 = £7$ for one part, so Mia gets $3 \times £7 = £21$. Then $£21 + £7 = £28$.
11	B 25	$45 \div 9 = 5$ for one part. There are 35 cars and 10 vans, and $35 - 10 = 25$.
12	C £28	The difference is $9 - 4 = 5$ parts, so one part is $£35 \div 5 = £7$. Tom has 4 parts: £28.
13	A 200 ml	$1 + 6 = 7$ parts. $1400 \div 7 = 200$ ml, and cordial is 1 part: 200 ml.
14	E £4	Work in pence: $1000p \div 5 = 200p$ for one part. Each larger share is 2 parts: 400p, which is £4.
15	A 18	Isla's 30 sweets are 5 parts, so one part is 6. Raj has 3 parts: $3 \times 6 = 18$.
16	D 36	$84 \div 7 = 12$ for one part. The shares are 12, 24 and 48, and $48 - 12 = 36$.
17	B 96	The 12 green counters are 1 part. There are $3 + 1 + 4 = 8$ parts: $8 \times 12 = 96$.
18	E £4	Work in pence: $720p \div 9 = 80p$ for one part. The largest share is 5 parts: 400p, which is £4.
19	C 48	$3 + 8 = 11$ parts. $66 \div 11 = 6$. The larger number is 8 parts: $8 \times 6 = 48$.
20	E 36	Jo to Sam is 3 : 4, so there are 7 parts. $63 \div 7 = 9$. Sam has 4 parts: $4 \times 9 = 36$.
21	56	$5 + 7 = 12$ parts. $96 \div 12 = 8$. The larger share is 7 parts: $7 \times 8 = 56$.
22	45	The 25 boys are 5 parts, so one part is 5. There are 9 parts: $9 \times 5 = 45$.
23	84	$1 + 3 + 7 = 11$ parts. $£132 \div 11 = £12$. The largest share is 7 parts: $7 \times £12 = £84$.
24	63	The difference is $7 - 2 = 5$ parts, so one part is $35 \div 5 = 7$. There are 9 parts: $9 \times 7 = 63$.

Q	Answer	How to get it
25	60	The difference is $5 - 3 = 2$ parts, so one part is $24 \div 2 = 12$. Blue is 5 parts: $5 \times 12 = 60$.
26	80	$3 + 4 + 5 = 12$ parts. $\pounds 240 \div 12 = \pounds 20$. The middle share is 4 parts: $4 \times \pounds 20 = \pounds 80$.
27	54	Amy had $3 + 3 = 6$ more than Tom, and that difference is $5 - 4 = 1$ part. So one part is 6, and 9 parts are $9 \times 6 = 54$.

Score: out of 27