

11+ Maths Practice Paper

Year 5 · Intermediate

Lesson 4.1: Direct proportion and scaling

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

4 bread rolls cost £1.20.

How much does 1 roll cost?

A 40p

B 30p

C 3p

D 80p

E £4.80

Answer: B Work in pence: $120 \div 4 = 30$ p.

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

Now turn over and start Part 1.

Part 1: Multiple choice

1

3 tickets cost £21.

How much do 5 tickets cost?

- A** £35 **B** £23 **C** £33 **D** £105 **E** £42

2

A recipe for 4 people uses 300 g of flour.

How much flour is needed for 6 people?

- A** 302 g **B** 450 g **C** 600 g **D** 500 g **E** 350 g

3

6 pens cost £1.80.

How much do 4 pens cost?

- A** £1.78 **B** £1.60 **C** £1.20 **D** 30p **E** £1.40

4

Pack A has 4 cans for £2.40. Pack B has 6 cans for £3.30.

How much cheaper is 1 can in Pack B than 1 can in Pack A?

- A** 90p **B** 10p **C** 5p **D** 15p **E** 55p

5

A recipe for 6 people uses 450 ml of milk.

How much milk is needed for 2 people?

- A** 150 ml **B** 446 ml **C** 225 ml **D** 900 ml **E** 300 ml

6

A 5 kg bag of potatoes costs £3.50.

What is the price of 1 kg?

- A** 7p **B** 50p **C** 75p **D** £17.50 **E** 70p

7

Which of these is NOT in direct proportion?

- A** the cost of a gym that charges £10 to join, then £5 a visit
 - B** the cost of pens at 40p each
 - C** the number of wheels on bikes, 2 on each bike
 - D** the cost of ribbon at 60p a metre
 - E** the pages from a printer that prints 20 a minute
-

8

8 m of ribbon cost £4.

How much do 3 m cost?

- A** £2
 - B** £1.20
 - C** £1.50
 - D** £12
 - E** £1
-

9

A recipe for 8 people uses 4 eggs.

How many eggs are needed for 6 people?

- A** 2
 - B** 3
 - C** 4
 - D** 5
 - E** 6
-

10

A machine makes 60 badges in 4 minutes.

How many badges does it make in 7 minutes?

- A** 63
 - B** 105
 - C** 120
 - D** 420
 - E** 90
-

11

5 cinema tickets cost £32.50.

How much does 1 ticket cost?

- A** £6.05
 - B** £7.50
 - C** £6
 - D** £162.50
 - E** £6.50
-

12

Lemonade for 6 people uses 9 lemons.

How many lemons are needed for 4 people?

- A** 7
 - B** 3
 - C** 8
 - D** 6
 - E** 12
-

13

Which box of cereal is the best buy?

- A 200 g for 90p
- B 300 g for £1.20
- C 400 g for £1.80
- D 600 g for £2.40
- E 500 g for £1.75

14

4 bottles of juice cost £3.

How many bottles can you buy with £9?

- A 6
- B 10
- C 27
- D 12
- E 13

15

6 identical books weigh 1800 g.

What do 4 of the books weigh?

- A 1798 g
- B 300 g
- C 1600 g
- D 1200 g
- E 1500 g

16

In a proportion table, 3 goes with 21 and 8 goes with 56.

What goes with 5?

- A 35
- B 23
- C 40
- D 30
- E 28

17

A recipe for 10 people uses 600 g of potatoes.

How much is needed for 15 people?

- A 605 g
- B 900 g
- C 1200 g
- D 650 g
- E 750 g

18

Kim is paid £36 for 4 hours of work.

How much is Kim paid for 7 hours?

- A £39
- B £72
- C £63
- D £54
- E £252

Part 2: Write your answer

19

7 pens cost £2.80.

How many pence does 1 pen cost?

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

20

A recipe for 4 people uses 250 g of butter.

How many grams of butter are needed for 6 people?

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

21

3 boxes hold 54 crayons altogether. Each box holds the same number.

How many crayons are in 8 boxes?

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

22

6 rolls cost 90p.

How many pence do 10 rolls cost?

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

23

A tap fills 45 litres in 5 minutes.

How many litres does it fill in 12 minutes?

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

24

5 pencils cost 75p.

How many pencils can you buy with £2.10?

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

Answer sheet

11+ Maths Practice Paper · Year 5 · Lesson 4.1: Direct proportion and scaling

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	A £35	1 ticket costs $\pounds 21 \div 3 = \pounds 7$, so 5 tickets cost $5 \times \pounds 7 = \pounds 35$.
2	B 450 g	For 2 people: $300 \div 2 = 150$ g. For 6 people: $150 \times 3 = 450$ g.
3	C £1.20	In pence: $180 \div 6 = 30$ p for 1 pen, so 4 pens cost 4×30 p = 120p, which is £1.20.
4	C 5p	Pack A: $240 \div 4 = 60$ p a can. Pack B: $330 \div 6 = 55$ p a can. 60 p – 55 p = 5p.
5	A 150 ml	2 people is 6 people $\div 3$, so $450 \div 3 = 150$ ml.
6	E 70p	In pence: $350 \div 5 = 70$ p.
7	A the cost of a gym that charges £10 to join, then £5 a visit	The £10 joining fee is paid only once, so 2 visits (£20) do not cost double 1 visit (£15).
8	C £1.50	1 m costs 400 p $\div 8 = 50$ p, so 3 m cost 3×50 p = 150p, which is £1.50.
9	B 3	For 2 people: $4 \div 4 = 1$ egg. For 6 people: $1 \times 3 = 3$ eggs.
10	B 105	In 1 minute: $60 \div 4 = 15$ badges. In 7 minutes: $15 \times 7 = 105$.
11	E £6.50	In pence: $3250 \div 5 = 650$ p, which is £6.50.
12	D 6	For 2 people: $9 \div 3 = 3$ lemons. For 4 people: $3 \times 2 = 6$ lemons.
13	E 500 g for £1.75	The price of 100 g: 45p, 40p, 45p, 35p and 40p. The 500 g box is cheapest for 100 g.
14	D 12	£9 is 3 times £3, so you can buy 3 times as many: $4 \times 3 = 12$.
15	D 1200 g	1 book weighs $1800 \div 6 = 300$ g, so 4 books weigh $4 \times 300 = 1200$ g.
16	A 35	1 goes with $21 \div 3 = 7$, so 5 goes with $5 \times 7 = 35$.
17	B 900 g	For 5 people: $600 \div 2 = 300$ g. For 15 people: $300 \times 3 = 900$ g.
18	C £63	In 1 hour Kim earns $\pounds 36 \div 4 = \pounds 9$, so in 7 hours Kim earns $7 \times \pounds 9 = \pounds 63$.
19	40	In pence: $280 \div 7 = 40$ p.
20	375	For 2 people: $250 \div 2 = 125$ g. For 6 people: $125 \times 3 = 375$ g.
21	144	1 box holds $54 \div 3 = 18$ crayons, so 8 boxes hold $8 \times 18 = 144$.
22	150	1 roll costs $90 \div 6 = 15$ p, so 10 rolls cost $10 \times 15 = 150$ p.
23	108	In 1 minute: $45 \div 5 = 9$ litres. In 12 minutes: $12 \times 9 = 108$ litres.
24	14	1 pencil costs $75 \div 5 = 15$ p. £2.10 is 210p, and $210 \div 15 = 14$ pencils.

Score: out of 24