

Decimals

Exam questions

Foundation and Higher tiers

Please write clearly in block capitals.

Name

Class

Teacher

Time allowed: 80 minutes

Materials

For this booklet you need a black pen, a pencil, a ruler, a rubber and a calculator for Section B.

Instructions

- Use black ink or black ballpoint pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer all questions in the spaces provided.
- **Section A** (questions 1 to 12): you must not use a calculator.
- **Section B** (questions 13 to 29): you may use a calculator.
- Do all rough work in this booklet. Cross through any work you do not want marked.

Information

- The marks for each question are shown in brackets.
- The maximum mark for this booklet is 72.

Advice

- Read each question carefully.
- In all calculations, show clearly how you work out your answer.

For teacher's use

Q	Mark	Q	Mark
1		16	
2		17	
3		18	
4		19	
5		20	
6		21	
7		22	
8		23	
9		24	
10		25	
11		26	
12		27	
13		28	
14		29	
15			
TOTAL			

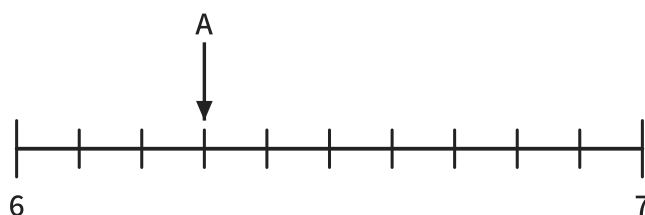
Section A



You must not use a calculator

Do not
write
outside
the box

- 1** Here is a number line.



- (a) Write down the number shown by arrow A.

Answer _____

[1 mark]

- (b) Draw an arrow on the number line to show 6.85

[1 mark]

- 2** (a) Work out $12.85 + 4.7$

Answer _____

[1 mark]

- (b) Work out $9 - 3.64$

Answer _____

[1 mark]

- 3** Here are five numbers.

0.6 0.06 0.61 0.16 0.605

Write the numbers in order of size.
Start with the smallest number.

Answer _____

[2 marks]

- 4** Leo says,
“ $0.3 \times 0.2 = 0.6$ ”

Is Leo correct?

Give a reason for your answer.

[1 mark]

- 5** Work out 2.36×4.5

Answer _____

[3 marks]

- 6** (a) Write 0.45 as a fraction in its simplest form.

Answer _____

[1 mark]

- (b) Write $\frac{3}{8}$ as a decimal.

Answer _____

[2 marks]

- 7** Work out $15.6 \div 0.06$

Answer _____

[2 marks]

- 8** Write the missing number in each box.

(a) $0.48 \times \boxed{} = 1.2$

[1 mark]

(b) $\boxed{} \div 0.4 = 3.5$

[1 mark]

- 9** Circle the calculation that has the largest answer.

48×0.9 $48 \div 0.9$ 48×1.1 $48 \div 1.1$

[1 mark]

- 10** Write $\frac{5}{12}$ as a recurring decimal.

Answer _____

[2 marks]

- 11** Show that $0.\dot{4}\dot{5} = \frac{5}{11}$

[3 marks]

- 12** Sam is asked to write $0.3\dot{6}$ as a fraction.
Here is his answer.

$$0.3\dot{6} = \frac{36}{99} = \frac{4}{11}$$

- (a) Explain why Sam is wrong.

[1 mark]

- (b) Write $0.3\dot{6}$ as a fraction in its simplest form.

Answer _____

[2 marks]

Section B

You may use a calculator

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outside
the box

- 13** A roll of ribbon is 25 m long.
Mei cuts 9 pieces from the roll. Each piece is 2.65 m long.

How much ribbon is left on the roll?

Answer _____ m

[2 marks]

- 14** Use your calculator to work out

$$\frac{9.3 + 15.72}{4.6}$$

Write down all the figures on your calculator display.

Answer _____

[2 marks]

- 15** Cheese costs £14.60 per kilogram.
Anwen buys 0.385 kg of cheese.
The shop rounds the cost to the nearest penny.

(a) Work out the cost of the cheese.

Answer £ _____

[2 marks]

(b) Anwen pays with a £10 note.
How much change does she get?

Answer £ _____

[1 mark]

- 16** The table shows the rainfall in a town each day for one week.

Day	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Rainfall (mm)	2.4	0	11.65	7.8	0.35	3.05	9.7

(a) Work out the total rainfall for the week.

Answer _____ mm

[1 mark]

(b) The total rainfall the week before was 28.9 mm.
How much more rain fell this week than the week before?

Answer _____ mm

[1 mark]

17 Use your calculator to work out

(a) 2.6^4

Answer _____ [1 mark]

(b) $\sqrt[3]{13.824}$

Answer _____ [1 mark]

(c) $\frac{4.7 + \sqrt{7.29}}{0.4^2}$

Answer _____ [1 mark]

18 Nadia's stride is 0.74 m long.
She walks 2590 m to school.

How many strides does Nadia take to walk to school?

Answer _____ [2 marks]

- 19** (a) Write $\frac{17}{40}$ as a decimal.

Answer _____

[1 mark]

- (b) Leah says,
“ $\frac{23}{64}$ is greater than 0.36”
Is Leah correct?
You must show your working.

[1 mark]

- 20** A box holds 18 tins of beans. All the tins have the same mass.
The mass of the box with the 18 tins in it is 7.935 kg.
The empty box has a mass of 0.465 kg.

Work out the mass of one tin.

Answer _____ kg

[2 marks]

- 21** Priya has 2.5 litres of plant food.
She puts 0.18 litres of plant food into each watering can.

(a) How many watering cans can she fill like this?

Answer _____

[2 marks]

(b) How much plant food is left over?

Answer _____ litres

[1 mark]

- 22** Bilal is painting a rectangular wall. The wall is 4.35 m wide and 2.6 m high.
He needs 0.125 litres of paint for each m^2 of wall, for each coat.
He will paint the wall with two coats.
Paint is sold in tins of 0.75 litres.

How many tins of paint does Bilal need to buy?
You must show your working.

Answer _____

[4 marks]

23

Here are five numbers.

0.63 $\frac{5}{8}$ $\frac{7}{11}$ $\frac{12}{19}$ 0.6299

Write the numbers in order of size.

Start with the smallest number.

Answer _____

[2 marks]

24

Diesel costs 148.9p per litre.

Tariq puts 36.45 litres of diesel into his van.

Work out how much Tariq pays.

Give your answer in pounds, to the nearest penny.

Answer £ _____

[3 marks]

25

Curtain fabric costs £13.70 per metre.

The fabric is sold in lengths that are a whole number of tenths of a metre, such as 2.6 m.

Saoirse has £60 to spend on fabric.

- (a) What is the greatest length of fabric Saoirse can buy?

Answer _____ m

[2 marks]

- (b) How much change does Saoirse get from £60?

Answer £ _____

[1 mark]

26

A van can carry a load of at most 1200 kg.

Mehmet puts 24 boxes and 22 sacks in the van.

Each box has a mass of 38.6 kg. Each sack has a mass of 12.75 kg.

- (a) Is the van overloaded?
You must show your working.

[2 marks]

- (b) What is the least number of sacks Mehmet needs to take out of the van so that it is not overloaded?

Answer _____

[1 mark]

- 27** A swimming pool is 33.3 m long.
Kwame swims 64 lengths of the pool.

(a) How far does Kwame swim?

Answer _____ m
[1 mark]

(b) Kwame wants to swim at least 3 km in total.
How many more lengths does he need to swim?

Answer _____
[2 marks]

- 28** Aoife is on the rota at a bike repair shop.
On Sunday her shift starts at 7:50 am and ends at 4:35 pm
Her lunch break of 40 minutes is unpaid.

(a) Find the length of time on Sunday that counts towards Aoife's pay.
Give your answer in hours and minutes.

Answer _____
[2 marks]

(b) Aoife earns £12.64 an hour.
Work out what she earns for Sunday.
Give your answer to the nearest penny.

Answer £ _____
[2 marks]

29

Ravi's electricity bill is worked out like this.

Electricity used	24.5p for each unit
Standing charge	53.2p for each day

In 30 days, Ravi uses 312.4 units of electricity.

Work out his bill for the 30 days.

Give your answer in pounds, to the nearest penny.

Do not
write
outside
the box

Answer £ _____

[3 marks]

END OF QUESTIONS