

Name

ANSWERS

Class



**MATHS TEACHER HUB**

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## Fractions, decimals and percentages

(9 – 1) Topic booklet

### Foundation

These questions have been collated from previous years GCSE Mathematics papers.

**You must have:** Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.

Total Marks

### Instructions

- Use **black** ink or ball-point pen.
- Fill in the **boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- You must **show all your working out.**
- If the question is a 1F question you are not allowed to use a calculator.
- If the question is a 2F or a 3F question, you may use a calculator to help you answer.

### Information

- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*

### Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

1 Write 35% as a decimal.



0.35

November 2024 – Paper 3F

(Total for Question 1 is 1 mark)

1 Write 23% as a fraction.



$\frac{23}{100}$

June 2024 – Paper 3F

(Total for Question 1 is 1 mark)

1 Write 38% as a decimal.

0.38

June 2023 – Paper 1F

(Total for Question 1 is 1 mark)

1 Write 0.3 as a fraction.

$\frac{3}{10}$

November 2022 – 1F

(Total for Question 1 is 1 mark)

1 Write 35% as a fraction.



$\frac{35}{100} = \frac{7}{20}$

June 2022 – Paper 3F

(Total for Question 1 is 1 mark)

1 Write  $\frac{3}{10}$  as a percentage.

30

%

November 2021 – Paper 1F

(Total for Question 1 is 1 mark)

1 Write 31% as a fraction.

$$\frac{31}{100}$$

November 2021 – Paper 2F

(Total for Question 1 is 1 mark)

1 Write 45% as a decimal.

$$0.45$$

November 2021 – Paper 3F

(Total for Question 1 is 1 mark)

1 Write  $\frac{4}{50}$  as a percentage.

$$= \frac{8}{100}$$

$$8$$

%

May 2018 – Paper 2F

(Total for Question 1 is 1 mark)

1 Write  $\frac{9}{10}$  as a decimal.

$$0.9$$

May 2018 – Paper 3F

(Total for Question 1 is 1 mark)

1 Write 0.37 as a fraction.

$$\frac{37}{100}$$

May 2020 – Paper 2F

(Total for Question 1 is 1 mark)

1 Write 0.75 as a fraction.



$$\frac{75}{100} = \frac{3}{4}$$

June 2019 – Paper 2F

(Total for Question 1 is 1 mark)

1 Write  $\frac{7}{100}$  as a decimal.



0.07

November 2017 – Paper 2F

(Total for Question 1 is 1 mark)

2 Write 0.7 as a fraction.



$\frac{7}{10}$

June 2023 – Paper 2F

(Total for Question 2 is 1 mark)

2 Write 37% as a fraction.



$\frac{37}{100}$

November 2022 – 2F

(Total for Question 2 is 1 mark)

2 Write 0.73 as a percentage.

73 %

June 2019 – Paper 1F

(Total for Question 2 is 1 mark)

2 Write 0.6 as a percentage.

60 %

November 2018 – Paper 1F

(Total for Question 2 is 1 mark)

2 Write 0.9 as a fraction.

$\frac{9}{10}$



November 2023 – Paper 2F

(Total for Question 2 is 1 mark)

2 Write 0.3 as a percentage.

30 %

May 2024 – Paper 1F

(Total for Question 2 is 1 mark)

2 Write 0.3 as a percentage.

30 %



May 2018 – Paper 3F

(Total for Question 2 is 1 mark)

2 Write 0.19 as a fraction.

$\frac{19}{100}$



Specimen 2 – Paper 3F

(Total for Question 2 is 1 mark)

2 Write 0.037 as a fraction.

$\frac{37}{1000}$

Sample 1 – Paper 1F

(Total for Question 2 is 1 mark)



3 Write  $\frac{31}{100}$  as a decimal.

0.31

May 2024 – Paper 1F

(Total for Question 3 is 1 mark)

3 Write  $\frac{4}{5}$  as a decimal.



0.8

November 2022 – 3F

(Total for Question 3 is 1 mark)

3 Write  $\frac{9}{100}$  as a decimal.

0.09

November 2021 – Paper 1F

(Total for Question 3 is 1 mark)

3 Write 40% as a fraction.



$\frac{4}{10}$

May 2020 – Paper 3F

(Total for Question 3 is 1 mark)

3 Write 0.23 as a percentage.



23

%

November 2019 – Paper 2F

(Total for Question 3 is 1 mark)

3 Write 0.7 as a fraction.



$\frac{7}{10}$

November 2019 – Paper 3F

(Total for Question 3 is 1 mark)

2 Write 3% as a fraction.

$$\frac{3}{100}$$

November 2018 – Paper 3F

(Total for Question 2 is 1 mark)

2 Write  $\frac{7}{16}$  as a decimal.

$$0.4375$$

Sample 1 – Paper 2F

(Total for Question 2 is 1 mark)

3 Write 20% as a fraction.

$$\frac{2}{10}$$

May 2018 – Paper 1F

(Total for Question 3 is 1 mark)

3 Write 0.21 as a fraction.

$$\frac{21}{100}$$

Specimen 1 – Paper 2F

(Total for Question 3 is 1 mark)

3 Write 0.075 as a fraction.  
Give your fraction in its simplest form.

$$\frac{3}{40}$$

Specimen 2 – Paper 2F

(Total for Question 3 is 2 marks)

4 Write  $\frac{1}{4}$  as a percentage.



..... %

May 2020 – Paper 2F

(Total for Question 4 is 1 mark)

4 Write  $\frac{3}{4}$  as a decimal.

.....  
0.75

May 2020 – Paper 1F

(Total for Question 4 is 1 mark)

4 Write  $\frac{4}{5}$  as a percentage.

.....  
80 %

June 2017 – Paper 1F

(Total for Question 4 is 1 mark)

4 Write 0.9 as a percentage.

.....  
90 %

Specimen 1 – Paper 1F

(Total for Question 4 is 1 mark)

5 Write 0.4 as a percentage.



.....  
40 %

June 2022 – Paper 2F

(Total for Question 5 is 1 mark)



5 Write 15% as a decimal.

0.15

November 2019 – Paper 1F

(Total for Question 5 is 1 mark)

5 Write 19% as a fraction.

$\frac{19}{100}$

June 2019 – Paper 3F

(Total for Question 5 is 1 mark)

5 Write 0.31 as a fraction.

$\frac{31}{100}$

November 2018 – Paper 2F

(Total for Question 5 is 1 mark)

5 Write  $\frac{3}{5}$  as a percentage.

60 %

Specimen 2 – Paper 3F

(Total for Question 5 is 1 mark)

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

$\frac{1}{2}$

0.55

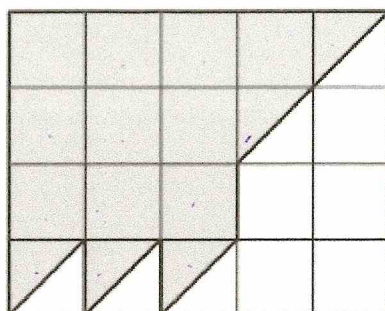
45%

45%,  $\frac{1}{2}$ , 0.55

June 2022 – Paper 1F

(Total for Question 5 is 1 mark)

9 What percentage of this shape is shaded?



$$\frac{12.5}{20} = \frac{62.5}{100}$$

↘  
x5

62.5 %

Specimen 1 – Paper 2F

(Total for Question 9 is 3 marks)

14 Here are two fractions.

$$\frac{7}{5}$$

$$\frac{5}{7}$$

Work out which of the fractions is closer to 1  
You must show all your working.

$$\begin{array}{ccc} \frac{49}{35} & & \frac{25}{35} \\ \nwarrow & \nearrow & \\ & \frac{35}{35} & \\ \swarrow & & \searrow \\ 14 \text{ parts away} & & 10 \text{ parts away} \end{array}$$

November 2017 – Paper 1F

(Total for Question 14 is 3 marks)