

Name

ANSWERS

Class



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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)



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.

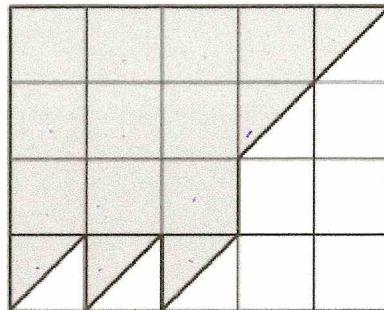
$\frac{1}{2}$ 0.55 45%

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?



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

$\times 5$

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.

$$\frac{49}{35} \qquad \frac{25}{35}$$

$\frac{35}{35}$

14 parts away 10 parts away

November 2017 – Paper 1F

(Total for Question 14 is 3 marks)