Name: SOLUTIONS

GCSE (1 - 9)

Buy me a coffee

Fractions, Decimals and Percentages

Solutions by
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These questions are compiled from *released* Pearson Edexcel GCSE maths exam papers
They contain exam questions from up until the ***Summer 2023*** exam series
More recent exam papers do exist but are withheld for mock exams
As new exam papers are released these worksheets will gradually be updated
The ***most current*** version of these worksheets will always be available at: kennethstafford.co.uk

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1

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

30 %

(Total for Question 1 is 1 mark)

[Edexcel, GCSE, Autumn 2021, Paper 1F, Q1]

2

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

0.09

(Total for Question 3 is 1 mark)

[Edexcel, GCSE, Autumn 2021, Paper 1F, Q3]

3

Write 31% as a fraction.

$\frac{31}{100}$

(Total for Question 1 is 1 mark)

[Edexcel, GCSE, Autumn 2021, Paper 2F, Q1]

4

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

1.02 0.12 1.20 0.21

0.12 0.21 1.02 1.20

(Total for Question 3 is 1 mark)

[Edexcel, GCSE, Autumn 2021, Paper 2F, Q3]

5

Write the following fractions in order of size.
Start with the smallest fraction.

$\frac{5}{8}$ $\frac{2}{3}$ $\frac{4}{9}$ $\frac{3}{5}$

0.675 0.6 0.4 0.6

$\frac{4}{9}$ $\frac{2}{3}$ $\frac{3}{5}$ $\frac{5}{8}$

.....

(Total for Question 15 is 2 marks)

[Edexcel, GCSE, Autumn 2021, Paper 2F, Q15]

6

Write 45% as a decimal.

0.45

.....

(Total for Question 1 is 1 mark)

[Edexcel, GCSE, Autumn 2021, Paper 3F, Q1]

7

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

0.320 0.400 0.350 0.309

0.309, 0.32, 0.35, 0.4

.....

(Total for Question 1 is 1 mark)

[Edexcel, GCSE, Autumn 2020, Paper 1F, Q1]

8

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

$3 \div 4$

$4 \overline{)3.^{3}0^{2}00}$ 0.75

0·75

(Total for Question 4 is 1 mark)

[Edexcel, GCSE, Autumn 2020, Paper 1F, Q4]

9

Write 0.37 as a fraction.

$\frac{37}{100}$

(Total for Question 1 is 1 mark)

[Edexcel, GCSE, Autumn 2020, Paper 2F, Q1]

10

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

25 %

(Total for Question 4 is 1 mark)

[Edexcel, GCSE, Autumn 2020, Paper 2F, Q4]

11

Write 40% as a fraction.

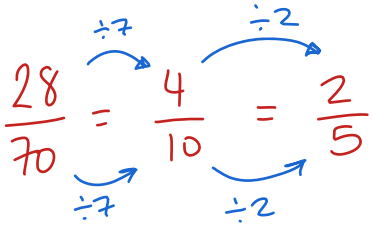
$40\% = \frac{40}{100} = \frac{4}{10} = \frac{2}{5}$

(Total for Question 3 is 1 mark)

[Edexcel, GCSE, Autumn 2020, Paper 3F, Q3]

12

Write the fraction $\frac{28}{70}$ in its simplest form.



2/5

(Total for Question 4 is 1 mark)

[Edexcel, GCSE, Autumn 2019, Paper 1F, Q4]

13

Write 15% as a decimal.

$15\% = \frac{15}{100} = 0.15$

0.15

(Total for Question 5 is 1 mark)

[Edexcel, GCSE, Autumn 2019, Paper 1F, Q5]

14

Write 0.23 as a percentage.

$0.23 = \frac{23}{100} = 23\%$

23 %

(Total for Question 3 is 1 mark)

[Edexcel, GCSE, Summer 2019, Paper 2F, Q3]

15

Write 0.7 as a fraction.

$\frac{1}{10}$

0.7

$\frac{7}{10}$

(Total for Question 3 is 1 mark)

[Edexcel, GCSE, Summer 2019, Paper 3F, Q3]

16

Write 0.73 as a percentage.

$0.73 = \frac{73}{100} = 73\%$

..... %

(Total for Question 2 is 1 mark)

[Edexcel, GCSE, Summer 2019, Paper 1F, Q2]

17

Write the following fractions in order of size.
Start with the smallest fraction.

$\frac{1}{3}$ $\frac{3}{4}$ $\frac{1}{4}$ $\frac{7}{12}$ $\frac{1}{2}$

$\frac{1\times4}{3\times4}$ $\frac{3\times3}{4\times3}$ $\frac{1\times3}{4\times3}$ $\frac{7}{12}$ $\frac{1\times6}{2\times6}$

$\frac{4}{12}$ $\frac{9}{12}$ $\frac{3}{12}$ $\frac{7}{12}$ $\frac{6}{12}$

$\frac{1}{4}$ $\frac{1}{3}$ $\frac{1}{2}$ $\frac{7}{12}$ $\frac{3}{4}$

.....

(Total for Question 8 is 2 marks)

[Edexcel, GCSE, Summer 2019, Paper 1F, Q8]

18

Write 0.75 as a fraction.

$0.75 = \frac{75}{100} = \frac{3}{4}$ (÷25, ÷25)

.....

(Total for Question 1 is 1 mark)

[Edexcel, GCSE, Summer 2019, Paper 2F, Q1]

19

Write 19% as a fraction.

$19\% = \frac{19}{100}$

.....

(Total for Question 5 is 1 mark)

[Edexcel, GCSE, Summer 2019, Paper 3F, Q5]

20

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

0.400 0.020 0.370 0.152 0.200

0.02 0.152 0.2 0.37 0.4

.....

(Total for Question 1 is 1 mark)

[Edexcel, GCSE, Autumn 2018, Paper 1F, Q1]

21

Write 0.6 as a percentage.

$0.6 = \frac{6}{10} = \frac{60}{100} = 60\%$

..... %

(Total for Question 2 is 1 mark)

[Edexcel, GCSE, Autumn 2018, Paper 1F, Q2]

22

Here are some fractions.

$\frac{9}{12}$ $\frac{6}{8}$ $\frac{18}{24}$ $\frac{10}{16}$ $\frac{15}{20}$

One of these fractions is **not** equivalent to $\frac{3}{4}$

(a) Which fraction?

$\frac{3}{4} = \frac{6}{8} = \frac{9}{12} = \frac{12}{16} = \frac{15}{20} = \frac{18}{24}$

$\frac{10}{16} = \frac{5}{8}$

$\frac{10}{16}$

(1)

[Edexcel, GCSE, Autumn 2018, Paper 1F, Q11]

23

Write 0.31 as a fraction.

$0.31 = \frac{31}{100}$

(Total for Question 5 is 1 mark)

[Edexcel, GCSE, Autumn 2018, Paper 2F, Q5]

24

Here are four fractions.

$\frac{3}{4}$ $\frac{5}{7}$ $\frac{19}{25}$ $\frac{11}{15}$

Write the fractions in order of size.
Start with the smallest fraction.

$3 \div 4 = 0.75$

$5 \div 7 = 0.\dot{7}14285\dot{}$

$19 \div 25 = 0.76$

$11 \div 15 = 0.7\dot{3}$

$\frac{5}{7}$ $\frac{11}{15}$ $\frac{3}{4}$ $\frac{19}{25}$

(Total for Question 6 is 2 marks)

[Edexcel, GCSE, Autumn 2018, Paper 2F, Q6]

25

Write 3% as a fraction.

$3\% = \frac{3}{100}$

(Total for Question 2 is 1 mark)

[Edexcel, GCSE, Autumn 2018, Paper 3F, Q2]

26

(a) Write the following numbers in order of size.
Start with the smallest number.

−6 6 −5 0 12

−6 −5 0 6 12

(1)

(b) Write the following numbers in order of size.
Start with the smallest number.

0.078 0.780 0.870 0.708

0·078 0·708 0·78 0·87

(1)

(Total for Question 2 is 2 marks)

[Edexcel, GCSE, Summer 2018, Paper 1F, Q2]

27

Write 20% as a fraction.

$20\% = \frac{20}{100} = \frac{2}{10} = \frac{1}{5}$

(Total for Question 3 is 1 mark)

[Edexcel, GCSE, Summer 2018, Paper 1F, Q3]

28

Here is a list of four fractions.

$\frac{4}{16} = \frac{1}{4}$ $\frac{2}{8} = \frac{1}{4}$ $\frac{15}{60} = \frac{1}{4}$ $\frac{3}{9} = \frac{1}{3}$

One of these fractions is **not** equivalent to $\frac{1}{4}$

Write down this fraction.

$\frac{3}{9}$

(Total for Question 4 is 1 mark)

[Edexcel, GCSE, Summer 2018, Paper 1F, Q4]

29

Gavin, Harry and Isabel each earn the same monthly salary.

Each month,

Gavin **saves** 28% of his salary and spends the rest of his salary

Harry spends $\frac{3}{4}$ of his salary and **saves** the rest of his salary $\frac{1}{4}$

the amount of salary Isabel saves : the amount of salary she spends = 3 : 7 $\frac{3}{10}$

Work out who saves the most of their salary each month.
You must show how you get your answer.

Gavin = 28%

Harry = $\frac{1}{4}$ = 25%

Isabel = $\frac{3}{10}$ = 30%

Isabel saves the most

(Total for Question 14 is 4 marks)

[Edexcel, GCSE, Summer 2018, Paper 1F, Q14]

30

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

$\frac{4}{50} = \frac{8}{100}$ = 8%

..... %

(Total for Question 1 is 1 mark)

[Edexcel, GCSE, Summer 2018, Paper 2F, Q1]

31

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

$\frac{9}{10} = 0.9$

(Total for Question 1 is 1 mark)

[Edexcel, GCSE, Summer 2018, Paper 3F, Q1]

32

Write 0.3 as a percentage.

$0.3 = \frac{3}{10} = \frac{30}{100} = 30\%$

(Total for Question 2 is 1 mark)

[Edexcel, GCSE, Summer 2018, Paper 3F, Q2]

33

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.

$\frac{7}{5} - 1 = \frac{7}{5} - \frac{5}{5} = \frac{2}{5}$

$1 - \frac{5}{7} = \frac{7}{7} - \frac{5}{7} = \frac{2}{7}$

$\frac{5}{7}$ is closer as $\frac{2}{5} > \frac{2}{7}$

(Total for Question 14 is 3 marks)

[Edexcel, GCSE, Autumn 2017, Paper 1F, Q14]

34

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

$\frac{7}{100} = 0.07$

.....

(Total for Question 1 is 1 mark)

[Edexcel, GCSE, Autumn 2017, Paper 2F, Q1]

35

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

$\frac{4}{5} = \frac{8}{10} = \frac{80}{100} = 80\%$

..... %

(Total for Question 4 is 1 mark)

[Edexcel, GCSE, Summer 2017, Paper 1F, Q4]

36

Here are four fractions.

$\frac{2}{5}$ $\frac{11}{30}$ $\frac{1}{2}$ $\frac{7}{15}$

Write these fractions in order of size.
Start with the smallest fraction.

$\frac{2}{5}$ $2 \div 5 = 0.4$

$\frac{11}{30}$ $11 \div 30 = 0.36$

$\frac{1}{2}$ $1 \div 2 = 0.5$

$\frac{7}{15}$ $7 \div 15 = 0.46$

$\frac{11}{30}$ $\frac{2}{5}$ $\frac{7}{15}$ $\frac{1}{2}$

.....

(Total for Question 4 is 2 marks)

[Edexcel, GCSE, Summer 2017, Paper 2F, Q4]

37

A delivery company has a total of 160 cars and vans.

the number of cars : the number of vans = 3 : 7 (10)

10 parts = 160
1 part = 16
3 parts = 48
7 parts = 112

Each car and each van uses electricity or diesel or petrol.

$\frac{1}{8}$ of the cars use electricity.
25% of the cars use diesel.
The rest of the cars use petrol.

Work out the number of cars that use petrol.
You must show all your working.

Electric = 1/8 of 48 = 48 ÷ 8 = 6
Diesel = 25% of 48 = 48 ÷ 4 = 12
Petrol = 48 − (6 + 12) = 30

30

(Total for Question 3 is 5 marks)

[Edexcel, GCSE, Summer 2022, Paper 1F, Q25]

38

Write 38% as a decimal.

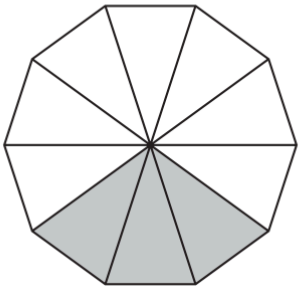
0·38

(Total for Question 1 is 1 mark)

[Edexcel, GCSE, Summer 2023, Paper 1F, Q1]

39

What fraction of this shape is shaded?



3/10

(Total for Question 2 is 1 mark)

[Edexcel, GCSE, Summer 2023, Paper 1F, Q2]

40

Write 0.7 as a fraction.

7/10

(Total for Question 2 is 1 mark)

[Edexcel, GCSE, Summer 2023, Paper 2F, Q2]

41

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

30 %

(Total for Question 2 is 1 mark)

[Edexcel, GCSE, Summer 2023, Paper 3F, Q2]

42

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

0·8

(Total for Question 3 is 1 mark)

[Edexcel, GCSE, November 2022, Paper 2F, Q3]