

Fractions, Decimals & Percentages (F)

A collection of 9-1 Maths GCSE Sample and Specimen questions from AQA, OCR, Pearson-Edexcel and WJEC Eduqas.

| | |
|--------------|--|
| Name: | |
| Total Marks: | |

1. Write these in order, smallest first.

0.34 $\frac{1}{3}$ 3.5%

..... [2]

2. Charlie, Mo and Andrzej share a flat.

- Charlie pays 25% of the rent.
- Mo pays $\frac{1}{2}$ of the rent.
- Andrzej pays £450.

How much do they pay altogether for the rent?

£ [4]

3. Katy organised a wedding.

Guests had to choose their meal from pasta, chicken or beef.

$\frac{1}{3}$ of the guests chose pasta.

$\frac{5}{12}$ of the guests chose chicken.

24 of the guests chose beef.

How many guests were at the wedding?

[4]

4. Here are four numbers.

$$0.43 \quad \frac{3}{7} \quad 43.8\% \quad \frac{7}{16}$$

Write these numbers in order of size.

Start with the smallest number.

..... [2]

5. Write 0.8 as a percentage.

..... % [1]

6. Write 0.075 as a fraction.

Give your fraction in its simplest form.

..... [2]

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

..... [2]

8. Write 0.19 as a fraction.

..... [1]

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

..... % [1]

10. Amelia, Hayden and Sophie did a test.

The total for the test was 75 marks.

Amelia got 56% of the 75 marks.

Hayden got $\frac{8}{15}$ of the 75 marks.

Sophie got 43 out of 75

Who got the highest mark?

You must show all your working.

[3]

11. Three cups, A, B and C, contain only salt and water.

The different mixtures are

A salt : water = 3 : 22

B salt = $\frac{1}{8}$

C salt = 12.75%

Which cup has the greatest proportion of salt?

You must show your working.

[3]

12. Circle the decimal that is closest in value to $\frac{2}{3}$

[1]

0.6 0.66 0.667 0.67

13. What is $\frac{1}{5}$ as a percentage?

Circle your answer.

[1]

1.5% 5% 15% 20%

14. What is 0.9 as a percentage?

Circle your answer.

[1]

0.009% 0.09% 9% 90%

15. What is the value of the digit 7 in 3.72?

Circle your answer.

[1]

$$\frac{1}{70}$$

$$\frac{7}{10}$$

$$\frac{1}{7}$$

$$\frac{7}{100}$$

16. Circle the decimal that has the same value as $\frac{4}{5}$

[1]

0.04

0.4

0.45

0.8

17. Shafira had collected £720 in a sponsored event.

She gave $\frac{1}{2}$ of the amount collected to her local youth club.

She gave 40% of the amount collected to a children's hospital.

She gave the rest of the money to a mountain rescue group.

(a) How much money did Shafira give to the mountain rescue group?

[3]

(b) What percentage of the £720 did Shafira give to the mountain rescue group?

[2]

18. Write 0.9 as a percentage

.....%

[1]

19. Write 0.21 as a fraction.

[1]

20. There are 500 passengers on a train.

$\frac{7}{20}$ of the passengers are men.

40% of the passengers are women.

The rest of the passengers are children.

Work out the number of children on the train.

[3]

21. Circle the percentage that is greater than $\frac{3}{4}$ and less than $\frac{4}{5}$

75%

78%

80%

82%

[1]

b) Circle the fraction that is greater than 0.3 and less than 0.4

$\frac{1}{4}$

$\frac{1}{3}$

$\frac{3}{10}$

$\frac{1}{2}$

[1]

CREDITS AND NOTES

| Q | Awarding Body | Q | Awarding Body | Q | Awarding Body |
|----|-----------------|----|-----------------|----|---------------|
| 1 | OCR | 11 | AQA | 21 | AQA |
| 2 | OCR | 12 | AQA | | |
| 3 | OCR | 13 | AQA | | |
| 4 | Pearson Edexcel | 14 | AQA | | |
| 5 | Pearson Edexcel | 15 | AQA | | |
| 6 | Pearson Edexcel | 16 | AQA | | |
| 7 | Pearson Edexcel | 17 | WJEC Eduqas | | |
| 8 | Pearson Edexcel | 18 | Pearson Edexcel | | |
| 9 | Pearson Edexcel | 19 | Pearson Edexcel | | |
| 10 | Pearson Edexcel | 20 | Pearson Edexcel | | |

Notes:

These questions have been retyped from the original sample/specimen assessment materials and whilst every effort has been made to ensure there are no errors, any that do appear are mine and not the exam board's (similarly any errors I have corrected from the originals are also my corrections and not theirs!).

Please also note that the layout in terms of fonts, answer lines and space given to each question does not reflect the actual papers to save space.

These questions have been collated by me as the basis for a GCSE working party set up by the GLOW maths hub - if you want to get involved please get in touch. The objective is to provide support to fellow teachers and to give you a flavour of how different topics "could" be examined. They should not be used to form a decision as to which board to use. There is no guarantee that a topic will or won't appear in the "live" papers from a specific exam board or that examination of a topic will be as shown in these questions.



Links:

AQA <http://www.aqa.org.uk/subjects/mathematics/gcse/mathematics-8300>

OCR <http://ocr.org.uk/gcsemaths>

Pearson Edexcel <http://qualifications.pearson.com/en/qualifications/edexcel-gcses/mathematics-2015.html>

WJEC Eduqas <http://www.eduqas.co.uk/qualifications/mathematics/gcse/>

Contents:

This version contains questions from:

AQA – Sample Assessment Material, Practice set 1 and Practice set 2

OCR – Sample Assessment Material and Practice set 1

Pearson Edexcel – Sample Assessment Material, Specimen set 1 and Specimen set 2

WJEC Eduqas – Sample Assessment Material