



**Bishops
Online
Tutoring**



Education Consultancy

Edexcel GCSE Mathematics

FRACTIONS, DECIMALS & PERCENTAGES

Materials Required:

- Pen
- HB Pencil
- Ruler (in centimetres and millimetres)
- Protractor
- Compass

Instructions:

- Use a black ink pen to answer all questions
 - Fill your name in the section below
- Answer the questions in the spaces provided
 - Show your working out for all answers

Information:

- The marks allocated for each question are displayed within brackets – utilise this information to gauge the appropriate amount of time to dedicate to each question
- Questions marked with an asterisk (*) will assess your written communication; be careful of spelling, punctuation and grammar with these questions

Advice:

- Carefully read the question before attempting to answer it
- Be vary of time and try to answer every question
- If you have enough time in the end, go back and check your answers. A good way to check your answers is to retry the question with the hope of getting the same answer as before without looking at your working out from before

NO CALCULATOR ALLOWED

NAME:

1. (a)

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

25 %

(1)

(b) Write 0.23 as a percentage.

23 %

(1)

(c) Write 42% as a fraction.
Give your answer in its simplest form.

$$42\% = \frac{42}{100} = \frac{21}{50}$$

$\frac{21}{50}$

(2)

(Total 4 marks)

2. (a) Write 0.15 as a percentage.

15 %

(1)

(b) Write 35% as a fraction.
Give your answer in its simplest form.

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

$\frac{7}{20}$

(2)

(Total 3 marks)

3. (a) Work out 50% of £60

£ 30

(1)

(b) Work out 25% of 20 metres.

$$\left. \begin{array}{l} 10\% = 2 \\ 10\% = 2 \\ 5\% = 1 \end{array} \right\} = 5$$

5 metres

(1)

(Total 2 marks)

4. (a)

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

$$\frac{9}{10} = \frac{90}{100} = 90\% = 0.9 \quad \underline{\hspace{2cm}} \quad (1)$$

(b)

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

$$\underline{75} \quad \% \quad (1)$$

(c) Write 23% as a fraction.

$$\underline{\frac{23}{100}} \quad (1)$$

(d)

Work out $\frac{1}{5}$ of 50

$$\frac{1}{5} \times \frac{50}{1} = \frac{50}{5} = \frac{10}{1} = 10 \quad \underline{10} \quad (1)$$

(Total 4 marks)

5. (a)

Write $\frac{1}{5}$ as a percentage.

$$\frac{1}{5} = \frac{2}{10} = \frac{20}{100} = 20\% \quad \underline{20} \quad \% \quad (1)$$

(b) Write 0.7 as a percentage.

$$\underline{70} \quad \% \quad (1)$$

(Total 2 marks)

6. (a) (i)

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

..... 25 %

(ii) Write 0.8 as a percentage.

..... 80 %

(2)

(b) Write 76% as a decimal.

..... 0.76

(1)

(c) Write 45% as a fraction.

Give your answer in its simplest form.

$$\frac{45}{100} = \frac{9}{20}$$

..... 9/20

(2)

(Total 5 marks)

7. (a) Write 0.85 as a percentage.

..... 85 %

(1)

(b)

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

$$\frac{1}{10} = \frac{10}{100} = 10\%$$

..... 10 %

(1)

(c) Write 60% as a decimal.

..... 0.6

(1)

(Total 3 marks)

8. (a) Write 0.37 as a percentage.

..... 37 %

(1)

(b)

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

..... 25 %

(1)

(c) Write 19% as a fraction.

$$\frac{19}{100}$$

(1)

(d) Write 40 as a fraction of 140
Give your fraction in its simplest form.

$$\frac{40}{140} = \frac{4}{14} = \frac{2}{7}$$

$$\frac{2}{7}$$

(2)

(Total 5 marks)

9. (a) Write 0.45 as a percentage.

$$45\%$$

(1)

(b)

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

$$75\%$$

(1)

(c) Write 30% as a fraction in its simplest form.

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

$$\frac{3}{10}$$

(2)

(Total 4 marks)

10. (a)

Write $\frac{1}{10} = \frac{10}{100}$

(i) as a decimal,

$$0.1$$

(ii) as a percentage.

$$10\%$$

(Total 2 marks)

11. (a)

Write $\frac{1}{5}$ as a percentage.

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

..... 20 %

(1)

(b) Write 0.64 as a percentage.

..... 64 %

(1)

(c) Write 70% as a decimal.

..... 0.7

(1)

(Total 3 marks)

12. (a) Write 0.38 as a percentage.

..... 38 %

(1)

(b)

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

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

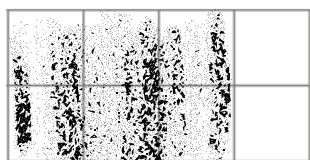
..... 30 %

(1)

(Total 2 marks)

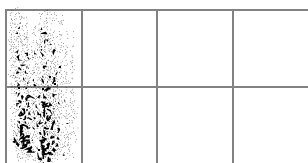
13. (a)

Shade $\frac{3}{4}$ of this shape.



(1)

(b) Shade 0.25 of this shape.



(1)

(c) Change 0.3 into a fraction.

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

$$\frac{30}{100}$$

(1)

(d) Change 0.7 into a percentage.

$$70\%$$

(1)

(e)

Work out $\frac{3}{4}$ of £36

$$\frac{3}{4} \times \frac{36}{1} = \frac{108}{4} = \frac{54}{2} = 27 \quad \text{£ } 27$$

(2)

(Total 6 marks)

14. (a) Write 92% as a decimal.

$$0.92$$

(1)

(b) Write 3% as a fraction.

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

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

(1)

(c) Work out 5% of 400 grams.

$$\begin{array}{l} \underline{400} \\ 10\% = 40 \\ \div 2 \downarrow \\ 5\% = 20 \end{array} \quad \div 2$$

$$20 \text{ grams}$$

(2)

(Total 4 marks)

15. Nassim buys petrol from his local garage.

On Monday, he filled up his tank.

On Tuesday, his tank was $\frac{3}{4}$ full.

(a) What fraction of the full tank of petrol had he used?

$\frac{1}{4}$

(1)

(a)

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

0.75

(1)

(b)

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

75%

(1)

(Total 3 marks)

16. A newspaper reporter did a survey.

He asked people what was their favourite leisure activity.

The table gives some information about the answers he got.

Favourite leisure activity	Percentage
Home Improvements	22%
Shopping	14%
Gardening	9%
All others	55%

$$22 + 14 + 9 = 45$$

$$100 - 45 = 55$$

(a) Complete the table.

(1)

- (b) Write 9% as a decimal.

.....0.09.....

(1)

400 people were asked in the survey.

- (c) How many people said their favourite leisure activity was gardening?

9% of 400

.....36.....

(2)

(Total 4 marks)

$$10\% = 40$$

$$1\% = 4$$

$$9\% = 10\% - 1\%$$

$$\therefore 9\% = 40 - 4$$

$$= 36$$