

Edexcel GCSE

Mathematics (Linear) – 1MA0

FRACTIONS, DECIMALS AND PERCENTAGES

Materials required for examination

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.

Tracing paper may be used.

Items included with question papers

Nil

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.

Calculators may be used.

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.

Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

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. (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.

$$\frac{42}{100} \xrightarrow{\div 2} \frac{21}{50}$$

..... $\frac{21}{50}$ (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.

$$\frac{35}{100} \xrightarrow{\div 5} \frac{7}{20}$$

..... $\frac{7}{20}$ (2)
(Total 3 marks)

3. (a) Work out 50% of £60

$$50\% = \frac{1}{2}$$
$$60 \div 2 = 30$$

£30..... (1)

- (b) Work out 25% of 20 metres.

$$25\% = \frac{1}{4}$$
$$\frac{1}{4} \text{ of } 20$$
$$20 \div 4 = 5$$

.....5..... metres (1)
(Total 2 marks)

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

..... 0.9

(1)

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

..... 75 %

(1)

(c) Write 23% as a fraction.

..... $\frac{23}{100}$

(1)

(d) Work out $\frac{1}{5}$ of 50

$$50 \div 5 = 10$$

..... 10

(1)

(Total 4 marks)

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

..... 20 %

(1)

(b) Write 0.7 as a percentage.

..... 70 %

(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.

$\frac{45}{100}$ $\div 5$ $\frac{9}{20}$

..... $\frac{9}{20}$

(2)

(Total 5 marks)

7. (a) Write 0.85 as a percentage.

..... 85 %

(1)

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

..... 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.

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

(Handwritten: 40/140 = 2/7 with a circled 20 above the equals sign and a circled 20 below the fraction line)

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

(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.

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

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

(2)
(Total 4 marks)

10. (a) Write $\frac{1}{10}$

- (i) as a decimal,

..... 0.1

- (ii) as a percentage.

..... 10%

(Total 2 marks)

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

..... 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)

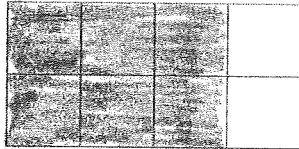
(b) Write $\frac{3}{10}$ as a percentage.

.....30.....%

(1)

(Total 2 marks)

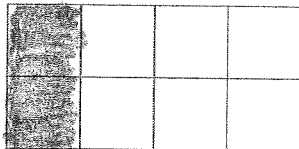
13. (a) Shade $\frac{3}{4}$ of this shape.



(1)

(b) Shade 0.25 of this shape.

$$0.25 = \frac{1}{4}$$



(1)

(c) Change 0.3 into a fraction.

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

(1)

(d) Change 0.7 into a percentage.

.....70.....%

(1)

(e) Work out $\frac{3}{4}$ of £36

$$\frac{1}{4} \text{ of } 36$$

$$36 \div 4 = 9$$

$$\frac{3}{4} = 9 \times 3 = 27$$

£ 27

(2)

(Total 6 marks)

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

0.92 (1)

(b) Write 3% as a fraction.

$\frac{3}{100}$ (1)

(c) Work out 5% of 400 grams.

$$\begin{array}{l} 10\% \text{ of } 400 = 40 \\ 5\% \text{ of } 400 = 20 \end{array}$$

20 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)

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

0.75 (1)

(c) 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%

- (a) Complete the table. $+$
- $$\begin{array}{r} 22 \\ 14 \\ \hline 45 \end{array}$$
- (b) Write 9% as a decimal.

$$100 - 45 = 55$$

(1)

$$0.09$$

(1)

400 people were asked in the survey.

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

$$9\% \text{ of } 400$$

$$\dots\dots\dots 36 \dots\dots\dots$$

(2)

(Total 4 marks)

$$\begin{aligned} 1\% \text{ of } 400 &= 4 \\ 9\% \text{ of } 400 &= 4 \times 9 \\ &= 36 \end{aligned}$$