Write your name here

Surname	Other names

In the style of:

Edexcel GCSE

Centre Number | | | | | |

Candidate Number | | | | |

Mathematics A

Number

Foundation Tier

Past Paper Style Questions
Arranged by Topic

Paper Reference
1MA0/1F

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser. Tracing paper may be used.

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.*
- **Calculators must not be used.**

Information

- The total mark for this paper is 100
- 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.

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.

Turn over ▶

1(a) Work out 7500 + 1500

Write your answer in words.

$$\begin{array}{r} 7500 \\ +\ 1500 \\ \hline 9000 \end{array}$$

Nine thousand

(2)

1(b) Write 4748 to the nearest hundred.

4700

(1)

1(c) What is the value of the digit 5 in the number 425 986?

5000

(1)

1(d) Write down the positive square root of 121.

11

(1)

1(e) Which of these is equal to one million?

Circle your answer.

10^3 10^4 10^5 10^6 10^7

2. Use the numbers from this list to answer the questions.

5	12	17	25	28	30	42	49

(a) Write down all the multiples of 5.

5, 25, 30

(2)

(b) Write down all the factors of 100.

5, 25

(2)

(c) Write down a square number.

25

(1)

(d) Write down three numbers that have a sum of 60.

5 and 25 and 30

(1)

3. Here are two numbers.

forty thousand 7500

Which number is bigger?

Give a reason for your answer.

Bigger number 40000

Reason $a > b$ if $a - b > 0$

So 40000 > 7500 because 40000 − 7500 = 32500 and 32500 > 0.

(2)

4. w, x and y are three positive whole numbers. w is one-fifth of y.

x is one-sixth of y.

y is less than 100.

What values could y take?

$w = \frac{1}{5}y \Rightarrow y = 5w$ (i.e. a multiple of 5)

$x = \frac{y}{6} \Rightarrow y = 6x$ (i.e. a multiple of 6)

$y < 100$ LCM$\{5, 6\} = 30$. Other common multiples of 5 and 6, which are also <100 are 60 and 90.

30, 60, 90

(5)

5. The numbers 13 and 17 are consecutive prime numbers.

The number halfway between them is 15.

15 is **not** a square number.

Find a pair of consecutive prime numbers less than 30 where the number halfway between them is a square number.

Prime no.s < 30: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29

4 is halfway between 3 and 5 and is also a sq. no.

3 and 5

(2)

6. Work out

$8^2 \div 4^3$

$\frac{64}{64} = 1$

1

.....

(2)

7. You are given that $34.7 \times 25 = 867.5$

(a) Write down the value of 347×25

$34.7 \times 25 \times 10 = 867.5 \times 10$

$= 8675$

8675

.....

(1)

(b) Write down the value of $85.02 \div 26$

.....

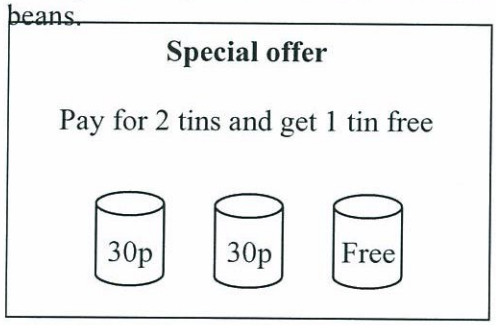
(1)

(c) Work out the value of 32.7×27

.....

(2)

8. A tin of baked beans costs 30p.
A shop has a special offer on the baked beans.



Helen wants 12 tins of baked beans.

(a) Work out how much she pays.

$\frac{12}{3} \times 60 = 4 \times 60 = 240p = £2.40$

£ 2.40
(3)

The normal price of a toaster is £30

In a sale, the price of the toaster is reduced by 15%.

(b) Work out the sale price of the toaster.

$15\% \text{ of } 30 = \frac{15}{100} \times 30 = \frac{3}{20} \times 30$

$= \frac{90}{20} = \frac{9}{2} = £4.50$

$30 - 4.50 = £25.50$

£ 25.50
(3)

(Total 6 marks)

N.B: For £30, 10% ⟶ £3
÷2 ( ) ÷2
5% ⟶ £1.50
×3 (15% ⟶ £4.50) ×3

9. Work out $\frac{1}{5}+\frac{2}{7}$

$$\frac{7+10}{35}=\frac{17}{35}$$

$\frac{17}{35}$

(Total 2 marks)

10.

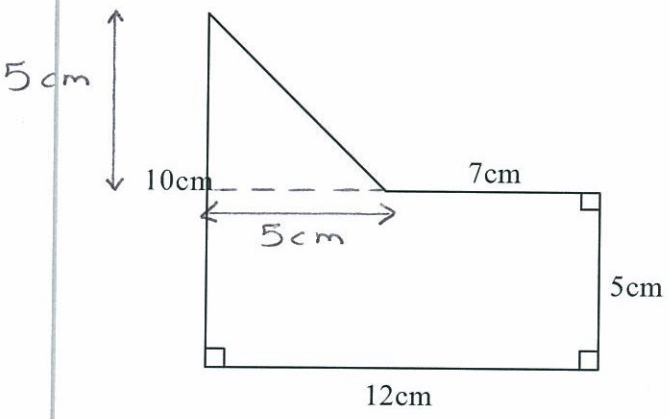


Diagram **NOT** accurately drawn

Work out the area of the shape.

$$12(5)+\frac{5(5)}{2}$$

$$=60+12.5$$

$$=72.5\text{ cm}^2$$

72.5 cm^2

(Total 4 marks)

11. Use the information that

$$324 \times 46 = 14904$$

to find the value of

(a) 3.24×4.6

$\frac{324}{100} \times \frac{46}{10} = \frac{14904}{1000} = 14.904$ 14.904

(1)

(b) 0.324×0.46

$\frac{324}{1000} \times \frac{46}{100} = \frac{14904}{100,000} = 0.14904$ 0.14904

(1)

(c) $14904 \div 4.6$

$324 \times 46 = 14904$

$\Rightarrow (324 \times 10) \times (46 \div 10) = 14904$

$\Rightarrow 3240 \times 4.6 = 14904 \Rightarrow \frac{14904}{4.6} = 3240$ 3240

(1)

(Total 3 marks)

12. $2x^2 = 72$

(a) Find a value of x.

$x = \pm\sqrt{\frac{72}{2}} = \pm\sqrt{36} = \pm 6$

6

(2)

(b) Express 72 as a product of its prime factors.

$72 = 2 \times 36$

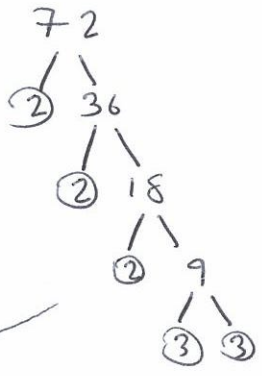
$= 2 \times 2 \times 18$

$= 2 \times 2 \times 2 \times 9$

$= 2 \times 2 \times 2 \times 3 \times 3$

or $2^3 \times 3^2$

OR



$2 \times 2 \times 2 \times 3 \times 3$

(2)

(Total 4 marks)

13. Here are the ingredients needed to make 8 pancakes.

Pancakes
Ingredients to make **8** pancakes
300 m*l* milk
1 egg
120 g flour
5 g butter

David makes 24 pancakes.

(a) Work out how much milk he needs.

$\frac{24}{8} \times 300 = 3 \times 300$

$= 900ml$

900 ml

(2)

Louis makes 12 pancakes.

(b) Work out how much flour he needs.

$\frac{12}{8} \times 120$

$= \frac{3}{2} \times 120$

$= 180g$

180 g

(2)

(Total 4 marks)

14. Shagufta has a part-time job.
She is paid £5.60 for each hour she works.

Last week Shagufta worked for 24 hours.

Work out Shagufta's total pay for last week.

$$\begin{array}{r} {}^{1}5.6 \\ \times\ 24 \\ \hline 224 \\ +1120 \\ \hline 134.4 \end{array}$$

£ 134.40

(Total 3 marks)

---

15. Here are the ages, in years, of 15 teachers.

34	53	41	28	37
22	32	40	50	34
44	28	45	45	55

Draw an ordered stem and leaf diagram to show this information.
You must include a key.

2	2 8 8
3	2 4 4 7
4	0 1 4 5 5
5	0 3 5

Key: 2 \| 2 = 22

(Total 3 marks)

16. Using the information that

$$4.8 \times 36 = 172.8$$

write down the value of

(a) 48×36

1728

.....

(1)

(b) 4.8×3.6

17.28

.....

(1)

(c) $172.8 \div 48$

3.6

.....

(1)

(Total 3 marks)

$4.8(10) \times \frac{36}{10} = 172.8$

$\Rightarrow 48 \times 3.6 = 172.8$

$\Rightarrow \frac{172.8}{48} = 3.6$

17. This rule is used to work out the total cost, in pounds, of hiring a bicycle.

Multiply the number of days' hire by 3 Add 6 to your answer

Peter hires a bicycle.

The total cost is £18

(a) Work out for how many days he hires the bicycle.

$\frac{18-6}{3} = \frac{12}{3} = 4$

4 days

(2)

(b) Write down an expression, in terms of n, for the total cost, in pounds, of hiring a bicycle for n days.

Total cost = $3n + 6$

(2)

(Total 4 marks)

18.

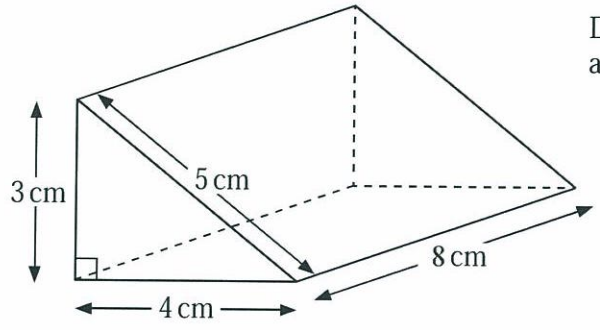


Diagram **NOT** accurately drawn

Work out the total surface area of the triangular prism.
Give the units with your answer.

$2\left(\frac{4 \times 3}{2}\right) + 8(5) + 8(4) + 8(3)$

$= 12 + 40 + 32 + 24$

$= 108 \text{ cm}^2$

108 cm^2

(Total 4 marks)

19. Work out an estimate for $\frac{302 \times 9.96}{0.51}$

$\simeq \frac{300 \times 10}{0.5} = \frac{3000}{0.5}$

$= \frac{6000}{1} = 6000$

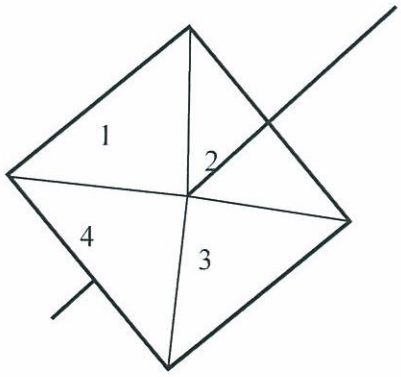
OR $\frac{30000}{5} = 6000$

OR $3000 \div \frac{1}{2} = 3000 \times \frac{2}{1} = 6000$

6000

(Total 3 marks)

20. Here is a 4-sided spinner.



The sides of the spinner are labelled 1, 2, 3 and 4.
The spinner is biased.
The table shows the probability that the spinner will land on each of the colours 1, 4 and 3.

Colour	1	2	3	4
Probability	0.2	0.4	0.3	0.1

Work out the probability the spinner will land on 2.

$1 - (0.2 + 0.3 + 0.1)$

$= 1 - 0.6 = 0.4$

(Total 2 marks)

21. (a) Write down the reciprocal of 5

$\frac{1}{5}$

(1)

(b) Work out the value of $2\frac{4}{5} - 1\frac{3}{4}$

Give your answer as a fraction in its simplest form.

$\frac{(2 \times 5)+4}{5} - \frac{(1 \times 4)+3}{4}$

$= \frac{14}{5} - \frac{7}{4}$

$= \frac{56 - 35}{20} = \frac{21}{20} = 1\frac{1}{20}$

$1\frac{1}{20}$

(3)

(c) Derek says that $4\frac{1}{3}$ is equal to 4.3

Derek is **wrong**.

Explain why.

He didn't state his rounding.

$4\frac{1}{3} = 4.\dot{3}$ or 4.3 (correct to 1 d.p.).

(1)

(Total 5 marks)

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