Pearson Edexcel
Level 1/Level 2 GCSE (9-1)

Centre Number

Candidate Number

Mathematics
Paper 1 (Non-Calculator)
Aiming for 4

Foundation Tier

Spring 2022 Practice Paper
Time: 1 hour 30 minutes

Paper Reference
1MA1/1F

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.*
- You must **show all your working.**
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- **Calculators may not be used.**

Information

- The total mark for this paper is 80. There are 33 questions.
- Questions have been arranged in an ascending order of mean difficulty, as found by all students in the November examinations
- Questions marked with an asterisk (*) also appear on the Higher Tier paper.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*

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.

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1   Here is a list of numbers.

$$5 \qquad 11 \qquad 18 \qquad 22 \qquad 29$$

From the list, write down a multiple of 3

....

(Total for Question 1 is 1 mark)

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

$$8 \qquad -7 \qquad -10 \qquad 1 \qquad 0 \qquad -2$$

....

(Total for Question 2 is 1 mark)

3 Grace recorded the eye colour of each of the students in her class.

The frequency table below shows her results.

Eye colour	Frequency
blue	10
brown	15
green	4

Grace then drew the bar chart below for this information.
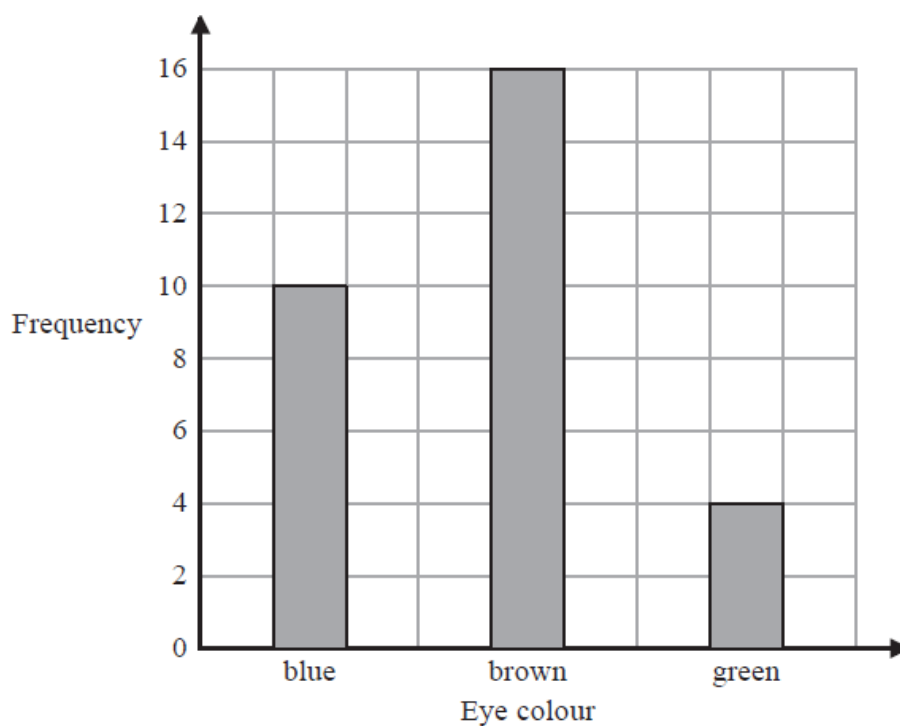
Write down one thing that is wrong with this bar chart.

....

....

....

(Total for Question 3 is 1 mark)

4

mirror line

Reflect the shaded shape in the mirror line.

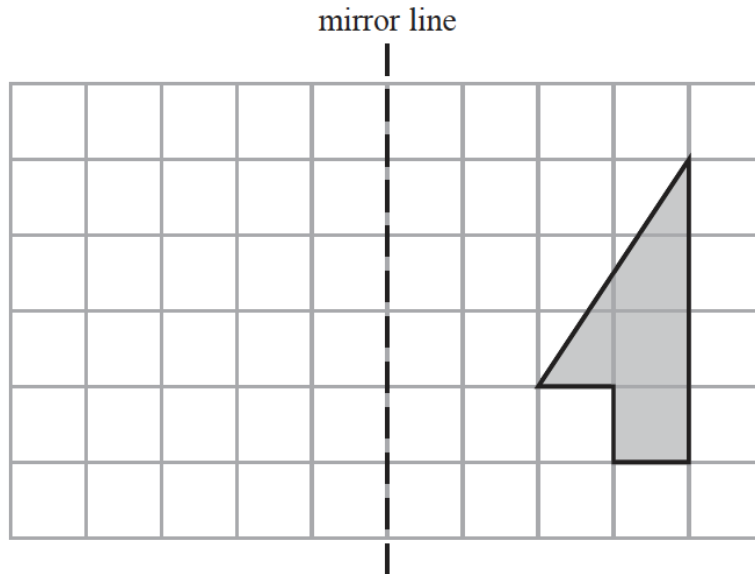**(Total for Question 4 is 2 marks)**

5 £42 is shared equally between 3 friends.

How much does each friend get?

£..

(Total for Question 5 is 2 marks)

6   Gita spins a fair 8-sided spinner.
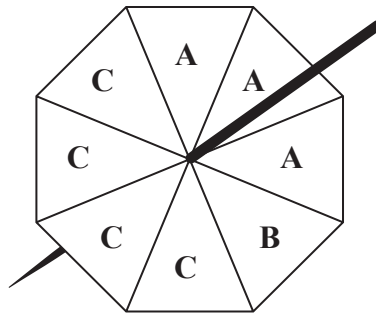
(a) On the probability scale, mark with a cross (✕) the probability that the spinner will land on **C**.
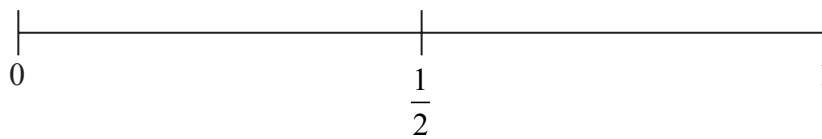
(1)

(b) On the probability scale, mark with a cross (✕) the probability that the spinner will land on **D**.

(1)
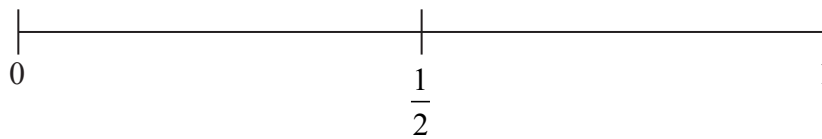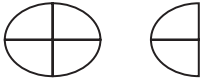
(Total for Question 6 is 2 marks)

7   Write 4.666 correct to the nearest whole number.

....

(Total for Question 7 is 1 mark)

8 The incomplete pictogram shows information about the number of eggs sold from a farm shop on Monday.

Monday	⊕ ◖
Tuesday	
Wednesday	

Key:

On Monday the shop sold 18 eggs.
On Tuesday the shop sold 24 eggs.
On Wednesday the shop sold 27 eggs.

Use this information to complete the pictogram and the key.

(Total for Question 8 is 4 marks)

9 Write 327 correct to the nearest ten.

....
(Total for Question 9 is 1 mark)

10
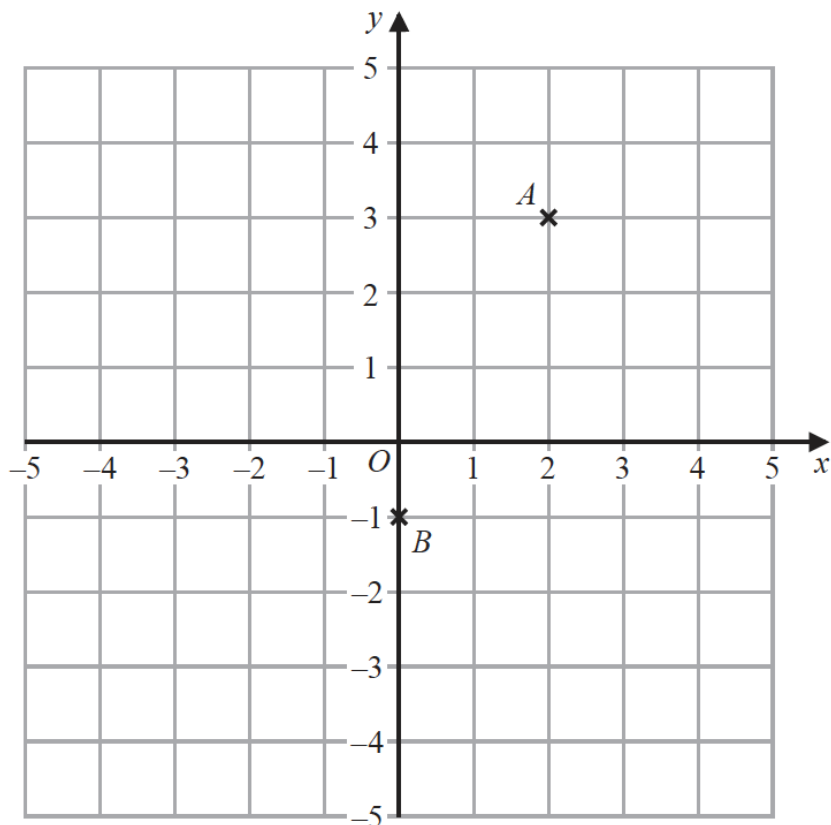
(*a*) Write down the coordinates of the point *A*.

(...................... , ...)

(1)

(*b*) Write down the coordinates of the point *B*.

(...................... , ...)

(1)

(*c*) On the grid, mark with a cross (✗) the point (–2, 1)
Label this point *C*.

(1)

(Total for Question 10 is 3 marks)

11   Danny buys,

> 1 loaf of bread for £1.20
> 1 bottle of milk for 70p
> 2 packets of cheese for £2.30 each packet

Danny pays with a £10 note.

He says,
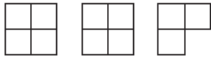
> "I should get £3.30 change."

Is Danny correct?
You must show how you get your answer.

(Total for Question 11 is 3 marks)

12 The pictogram shows information about the number of video games sold in a shop on

Monday	⊞ ⊞
Tuesday	⊞ ⊞ ⊟
Wednesday	⊞ ☐
Thursday	
Friday	

Key:

⊞ represents 8 video games

(*a*) How many video games were sold on Monday?

....
(1)

More video games were sold on Tuesday than on Wednesday.

(*b*) How many more?

....
(2)

On Thursday and Friday, a total of 32 video games were sold in the shop.

$\frac{1}{4}$ of these 32 video games were sold in the shop on Thursday.

(*c*) Complete the pictogram for Thursday and Friday.

(3)

(Total for Question 12 is 6 marks)

---

13 Write down the value of 7^2

....
(Total for Question 13 is 1 mark)

---

14   Ishmael asked 30 students at college to tell him the sport they each like the best from cricket or tennis or swimming.

11 of the 20 female students said swimming.
  2 of the male students said tennis.
  5 students said cricket.

The number of male students who said cricket was the same as the number of male students who said swimming.

Complete the two-way table.

	Cricket	Tennis	Swimming	Total
Male students				
Female students				20
Total				30

(Total for Question 14 is 3 marks)

15   Write $\dfrac{3}{10}$ as a percentage.

....%

(Total for Question 15 is 1 mark)

16 Jenny has 12 marbles.

$\frac{1}{4}$ of these 12 marbles are large.

The rest of these 12 marbles are small.

Each large marble has a weight of 70 grams.
Each small marble has a weight of 50 grams.

Work out the total weight of the 12 marbles.

.... grams

(Total for Question 16 is 4 marks)

17 Write down the value of the 7 in the number 8765

....

(Total for Question 17 is 1 mark)

18 The diagram shows a number machine.

input ⟶ $\times 2$ ⟶ -3 ⟶ output

(*a*) Find the output when the input is 7

....

(1)

(*b*) Find the input when the output is 41

....

(2)

(Total for Question 18 is 3 marks)

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

0.32   0.4   0.35   0.309

....

(Total for Question 19 is 1 mark)

20 Write $\dfrac{9}{100}$ as a decimal.

....

(Total for Question 20 is 1 mark)

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

....

(Total for Question 21 is 1 mark)

22 A number sequence starts 1   2   4

Emma says that the next term is 7

(*a*) Explain why Emma may be correct.

....

....

....

(1)

Here are the first four terms of the sequence of triangle numbers.

1   3   6   10

(*b*) Find the 8th term of this sequence.

....

(2)

(Total for Question 22 is 3 marks)

23 Rachel records the temperature in her garden at noon each day.

On Monday, the temperature was 5 °C.
On Tuesday, the temperature was 10 ° less than the temperature on Monday.
On Wednesday, the temperature was 3° greater than the temperature on Tuesday.

Find the difference between the temperature on Monday and the temperature on Wednesday.
You must show all your working.

.... °C

(Total for Question 23 is 2 marks)

24 (*a*) Write down the mathematical name of this quadrilateral.
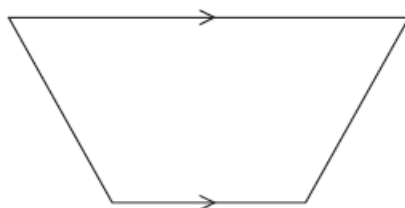
....
(1)

(*b*) Write down the mathematical name of this 3‑D shape.

....
(1)
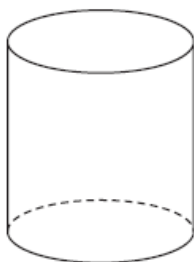
(Total for Question 24 is 2 marks)

25 3 kg of carrots cost £1.80
2 kg of carrots and 5 kg of potatoes cost a total of £3.45

Work out the total cost of 4 kg of carrots and 2 kg of potatoes.
You must show all your working.

£...

(Total for Question 25 is 4 marks)

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

6.72×10^5 $\qquad$ 67.2×10^{-4} $\qquad$ 672×10^4 $\qquad$ $0.000\,672$

....

(Total for Question 26 is 2 marks)

27 (*a*) Expand $2(a + d)$

....
(1)

(*b*) Factorise $6y^2 - 5y$

....
(1)

(*c*) Solve $4x - 7 = 37$

$x =$...
(2)

(Total for Question 27 is 4 marks)

28 Sean pays £10 for 24 chocolate bars.
He sells all 24 chocolate bars for 50p each.

Work out Sean's percentage profit.

.... %

(Total for Question 28 is 3 marks)

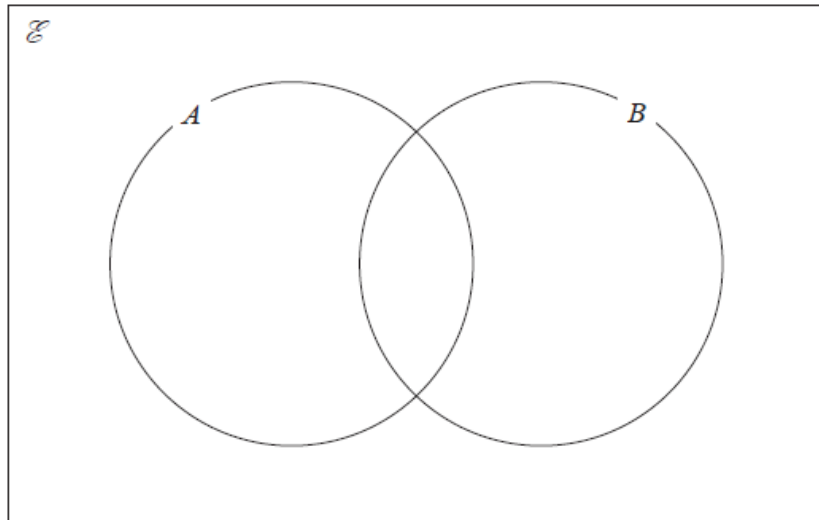**29** $\mathscr{E}$ = {even numbers less than 19}
A = {6, 12, 18}
B = {2, 6, 14, 18}
Complete the Venn diagram for this information.

(Total for Question 29 is 3 marks)

30 Heidi wants to make some biscuits using this recipe.

Makes 12 biscuits

125 g butter

200 g flour

50 g sugar

Heidi thinks that she has,

500 g butter
700 g flour
250 g sugar

Assuming that these weights are correct,

(*a*) work out the greatest number of biscuits Heidi can make.
You must show all your working.

....

(4)

Heidi is wrong.
She has more than 250 g of sugar.

(*b*) Does this affect the greatest number of biscuits Heidi can make?
Give a reason for your answer.

....

....

....

(1)

(Total for Question 30 is 5 marks)

31 The table gives information about the number of points scored by each of 16 students in a game.

Number of points	Frequency
0	1
1	3
2	5
3	4
4	3

Tina worked out the median of the number of points scored to be 5

(*a*) Explain why it is **not** possible for the median to be 5

....

....

....

(1)

Tina also worked out the total number of points scored by the 16 students in the game.

Here is her working.

$$(0 \times 1) + (1 \times 3) + (2 \times 5) + (3 \times 4) + (4 \times 3) = 1 + 3 + 10 + 12 + 12 = 38$$

Tina made a mistake in her working to find the total number of points scored.

(*b*) Describe the mistake that Tina made.

....

....

....

(1)

(Total for Question 31 is 2 marks)

32 (*a*) Expand $x(x-4)$

....
(1)

(*b*) Factorise $15y-10$

....
(1)

(*c*) Solve $7(f-5)=28$

$f=$ ....
(2)

(Total for Question 32 is 4 marks)

33 Robin buys a watch for £80
He sells the watch for £56

Work out his percentage loss.

....%

(Total for Question 33 is 3 marks)

TOTAL FOR PAPER IS 80 MARKS