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

Wednesday 6 November 2024

Morning (Time: 1 hour 30 minutes)

Paper reference **1MA1/1F**

Mathematics

Paper 1 (Non-Calculator)
Foundation Tier

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB or B pencil, eraser, Formulae Sheet (enclosed). Tracing paper may be used.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- If pencil is used for diagrams/sketches/graphs it must be dark (HB or B).
- **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
- 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.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 Write 25% as a decimal.

....

(Total for Question 1 is 1 mark)

2 Here are the first four even numbers.

$$2 \qquad 4 \qquad 6 \qquad 8$$

Find the 10th even number.

....

(Total for Question 2 is 1 mark)

3 Change 15 centimetres into millimetres.

.... millimetres

(Total for Question 3 is 1 mark)

4 Write down the multiple of 9 that is between 20 and 30

....

(Total for Question 4 is 1 mark)

5 Work out $500 + 145$

....

(Total for Question 5 is 1 mark)

6 Javid hires a car for 10 days.
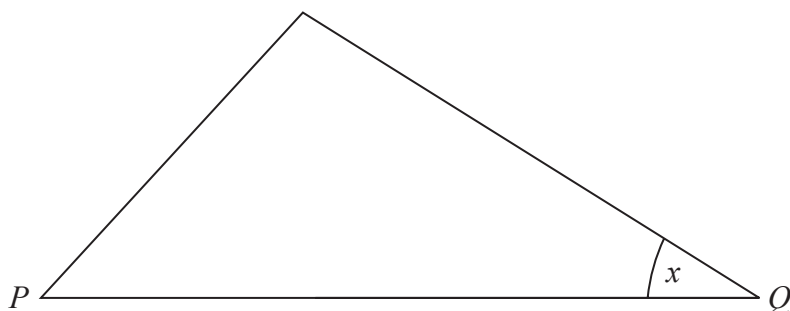He pays £45 for each day.
He also pays £30 for insurance.

Javid pays with ten £50 notes.
Work out how much change he should get.

£..

(Total for Question 6 is 3 marks)

7 Here is an accurately drawn triangle.

(a) Measure the length of the side *PQ*.
Give your answer in centimetres.

.... centimetres
(1)

(b) What type of angle is the angle marked *x*?

....
(1)

(c) Measure the size of the angle marked *x*.

°
....
(1)

(Total for Question 7 is 3 marks)

8
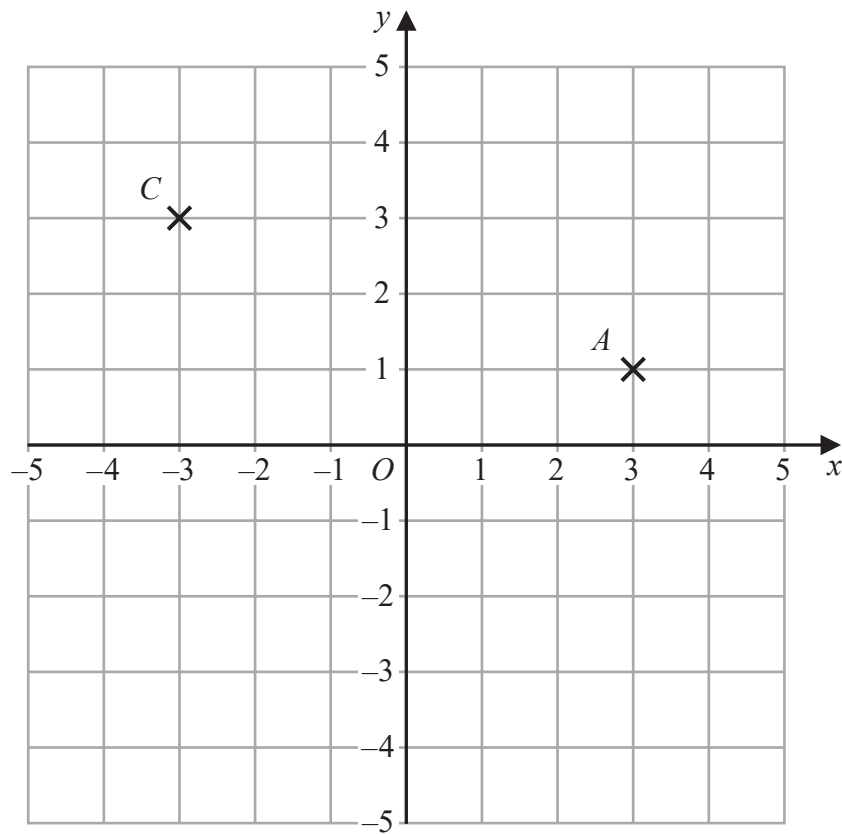
(a) Write down the coordinates of point *A*.

(........................ , ...)
(1)

(b) On the grid, mark with a cross (×) the point (3, −4)
Label this point *B*.

(1)

(c) Write down the coordinates of the midpoint of *AC*.

(........................ , ...)
(1)

(Total for Question 8 is 3 marks)

9 Milly collects stickers of sports players.
She only has stickers of tennis players, football players and cricket players.

The incomplete bar chart shows some information about the number of stickers Milly has.
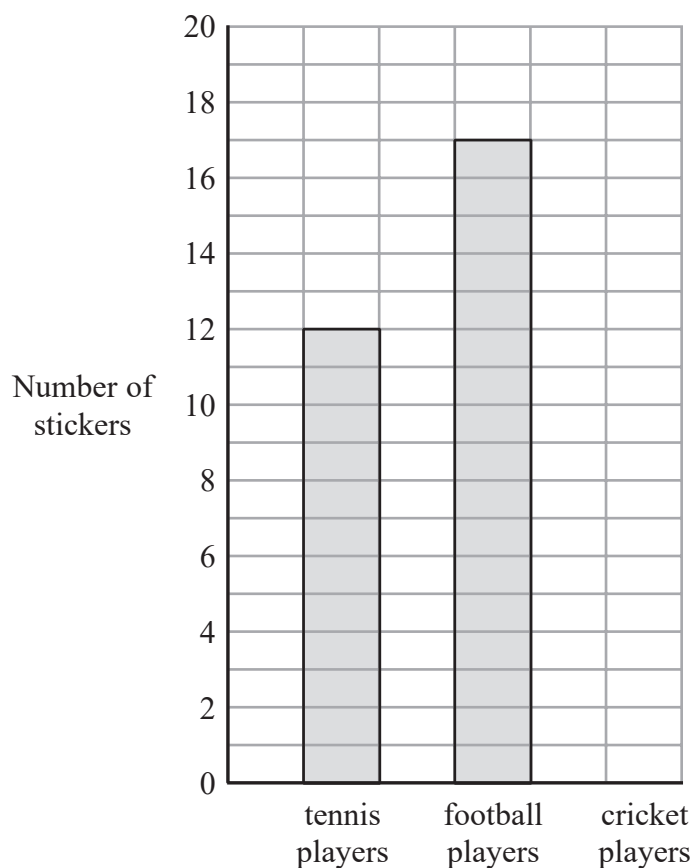
Milly has a total of 40 stickers.

(a) Complete the bar chart.

(3)

(b) What fraction of the 40 stickers are stickers of tennis players?
Give your fraction in its simplest form.

....

(2)

Ewan also collects stickers.
He only has large stickers and small stickers.

For Ewan's stickers,

the number of large stickers : the number of small stickers = 5 : 4

(c) Write down the fraction of Ewan's stickers that are large stickers.

....

(1)

(d) Write the ratio 5 : 4 in the form $n : 1$

....

(1)

(Total for Question 9 is 7 marks)
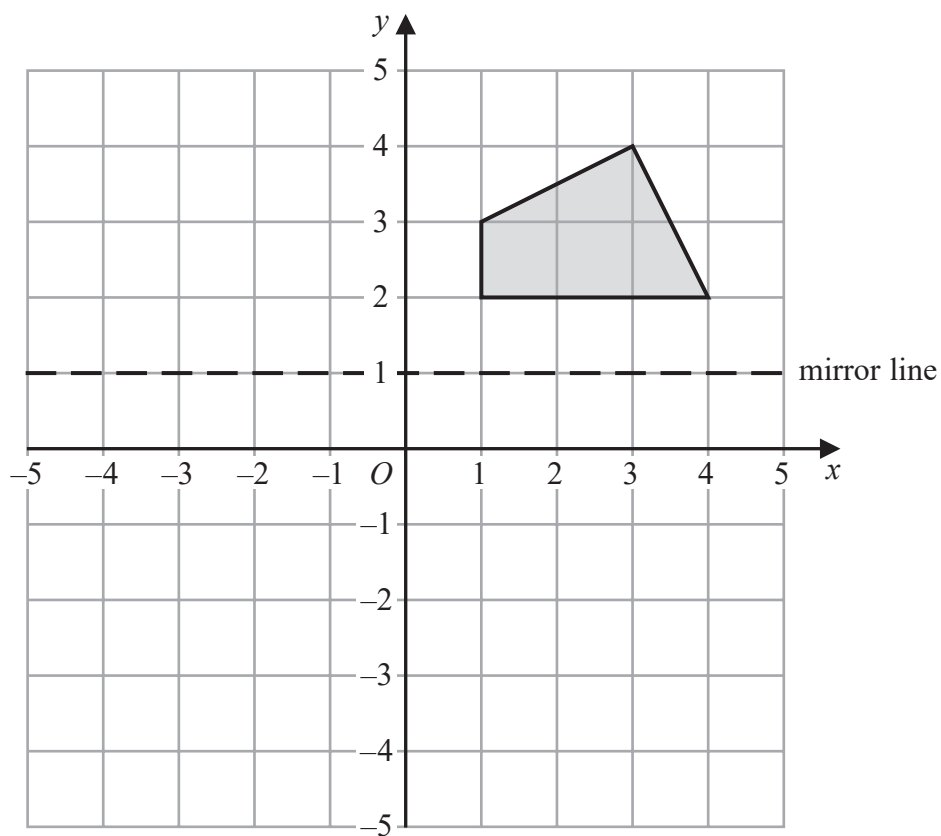
(a) On the grid, reflect the shaded shape in the mirror line.

(2)

(b) Write down the equation of the mirror line.

....

(1)

(Total for Question 10 is 3 marks)

11 500 people were asked what type of film they liked best.

280 of the 500 people were adults.
100 of the adults said they liked action films best.
80 of the children said they liked thriller films best.

150 of the people said they liked action films best.
200 of the people said they liked comedy films best.

(a) Complete the two-way table.

	Comedy	**Thriller**	**Action**	**Total**
Adults				
Children				
Total				500

(3)

One of these 500 people is chosen at random.

(b) Find the probability that this person is an adult who said they liked action films best.

....

(2)

(Total for Question 11 is 5 marks)

12 Olly was asked to work out $5 - 3 \times 4$

Olly wrote $5 - 3 = 2$
He then worked out 2×4

Explain what is wrong with Olly's method.

....

....

....

(Total for Question 12 is 1 mark)

13 Here is a number machine.

input $\longrightarrow$ [$+5$] $\longrightarrow$ [$\div 2$] $\longrightarrow$ output
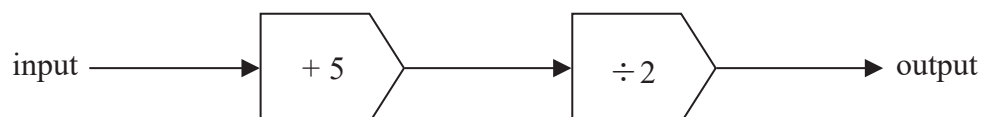
(a) Find the output when the input is 11

....

(2)

Here is a different number machine.

input $\longrightarrow$ [..........] $\longrightarrow$ [$\times 4$] $\longrightarrow$ output

When the input is 10, the output is 28

(b) Complete this number machine.

(2)

(Total for Question 13 is 4 marks)

14 Here is a cuboid of length 10 cm and width 4 cm.
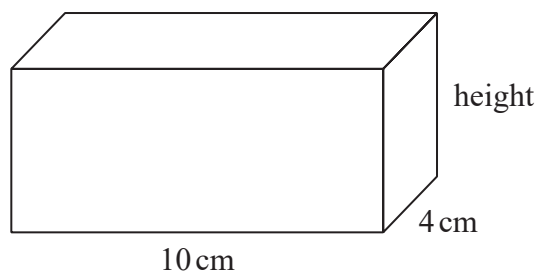
The cuboid has a volume of 200 cm³

(a) Work out the height of the cuboid.

.... cm

(2)

Here is a different cuboid.
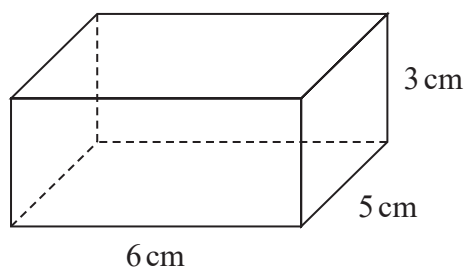
(b) Work out the total surface area of this cuboid.

.... cm²

(3)

(Total for Question 14 is 5 marks)

15 (a) Factorise $6a + 15$

....

(b) Solve $4(3y + 1) = 28$

$y = $ ....

(Total for Question 15 is 4 marks)

16 1 cup of tea and 1 cup of coffee cost £4.50
3 cups of tea and 1 cup of coffee cost £8.50

Work out the total cost of 4 cups of tea and 3 cups of coffee.
You must show all your working.

£...

(Total for Question 16 is 5 marks)

17 Gita wants to make 24 litres of green paint.
She is going to mix blue paint, yellow paint and white paint in the ratio $4:3:1$

She has

        12 litres of blue paint
         7 litres of yellow paint
         5 litres of white paint.

Does Gita have enough blue paint, yellow paint and white paint to make 24 litres of green paint?
You must show how you get your answer.

(Total for Question 17 is 3 marks)

18 Work out $818.4 \div 1.2$

....

(Total for Question 18 is 3 marks)

19 The table shows the probabilities that a biased dice will land on 3, on 4, on 5 and on 6

Number on dice	1	2	3	4	5	6
Probability			0.10	0.30	0.05	0.25

Karim assumes that the probabilities that the dice will land on 1 and on 2 are the same.

Karim rolls the biased dice 500 times.

(a) Assuming Karim is right, work out an estimate for the number of times the dice will land on 2

....

(3)

Karim is wrong.
The probability that the dice will land on 2 is greater than the probability that the dice will land on 1

(b) How does this information affect your answer to part (a)?

....

....

....

(1)

(Total for Question 19 is 4 marks)

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20 (a) Work out $3\dfrac{1}{2} - 1\dfrac{1}{6}$

Give your answer as a mixed number.

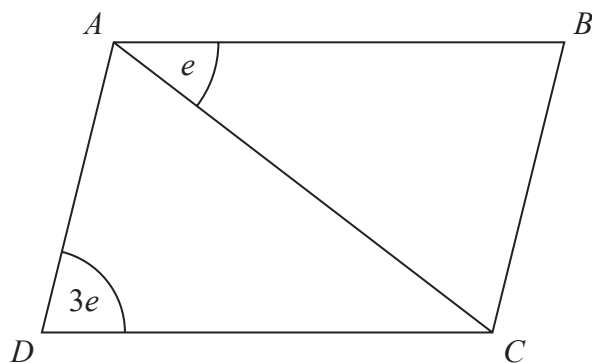..

(2)

(b) Show that $5\dfrac{1}{4} \div 2\dfrac{1}{3} = 2\dfrac{1}{4}$

(3)

(Total for Question 20 is 5 marks)

21 *ABCD* is a parallelogram.

All angles are measured in degrees.

Find an expression, in terms of *e*, for the size of angle *CAD*.
Give a reason for each stage of your working.

....

(Total for Question 21 is 3 marks)

22 A car travelled 4.96 miles at an average speed of 30.4 miles per hour.

(a) Work out an estimate for the time taken by the car.
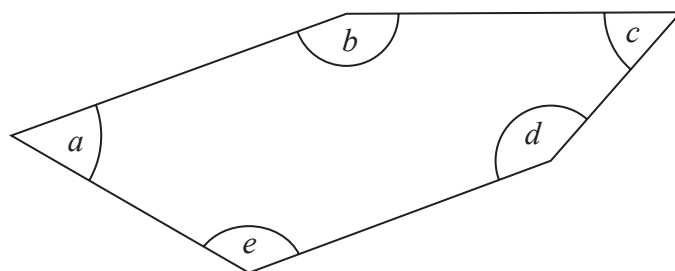Give your answer in minutes.

.... minutes

(3)

(b) Is your answer to part (a) an underestimate or an overestimate?
Give a reason for your answer.

....

....

....

(1)

(Total for Question 22 is 4 marks)

23 Here is a pentagon.

Angle a = angle c
Angle b = 155°
Angle d is three times the size of angle c
Angle e is two times the size of angle c

Work out the size of angle a

....°

(Total for Question 23 is 4 marks)

P 7 5 1 5 7 A 0 1 9 2 4

24 The graph shows the volume of water, V litres, in a tank at time t seconds.

Volume
(V litres)

Time (t seconds)
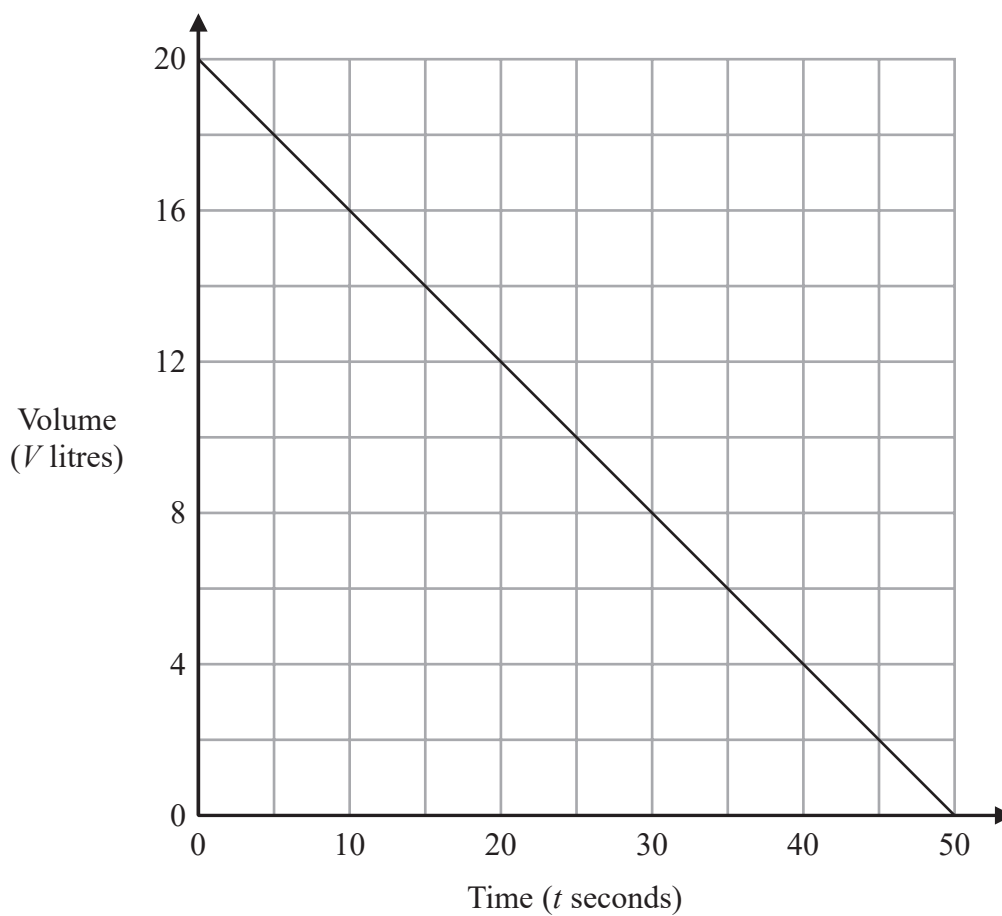
What does the gradient of this graph represent?

....

....

....

(Total for Question 24 is 1 mark)

25 Make w the subject of the formula $y = 3w - 10$

....

(Total for Question 25 is 2 marks)

26 Solve $x^2 - 2x - 15 = 0$

....

(Total for Question 26 is 3 marks)

TOTAL FOR PAPER IS 80 MARKS

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