Please check the examination details below before entering your candidate information

Candidate surname	Other names

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

Centre Number | | | | | |

Candidate Number | | | | |

Mock Set 6 – Spring 2021

Time: 1 hour 30 minutes

Paper Reference **1MA1/2F**

Mathematics

Paper 2 (Calculator)
Foundation Tier

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator. 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 be used.**
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

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 ▶

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S 6 8 5 9 0 A 0 1 2 0

Pearson

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 Write 0.75 as a percentage.

.....%

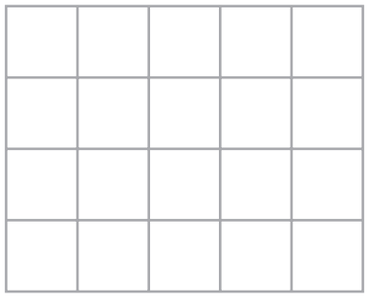
(Total for Question 1 is 1 mark)

2 Change 3 metres into centimetres.

..... centimetres

(Total for Question 2 is 1 mark)

3 Shade $\frac{1}{5}$ of this shape.



(Total for Question 3 is 1 mark)

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

4 −5 5 0 −3

.....

(Total for Question 4 is 1 mark)

5 Here are 9 numbers.

2 2 2 3 3 4 4 5 8

Write down the median.

.....

(Total for Question 5 is 1 mark)

6 Pedro goes to a cafe.
He buys 3 cups of hot chocolate and 3 slices of toast.

Each cup of hot chocolate costs £3.25
Each slice of toast costs £1.10

Pedro pays with a £10 note and a £5 note.

He thinks he should get more than £2 in change.

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

(Total for Question 6 is 4 marks)

7 (a) Simplify $3 \times a \times 4 \times b$

.....

(1)

(b) Simplify $y^2 + y^2 + y^2$

.....

(1)

(Total for Question 7 is 2 marks)

8 (a) Write down a factor of 10

.....

(1)

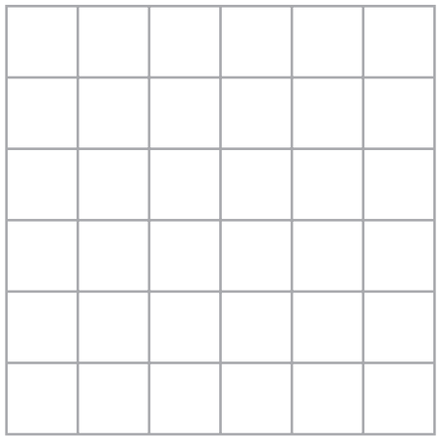
(b) Write down an even number that is between 21 and 25

.....

(1)

(Total for Question 8 is 2 marks)

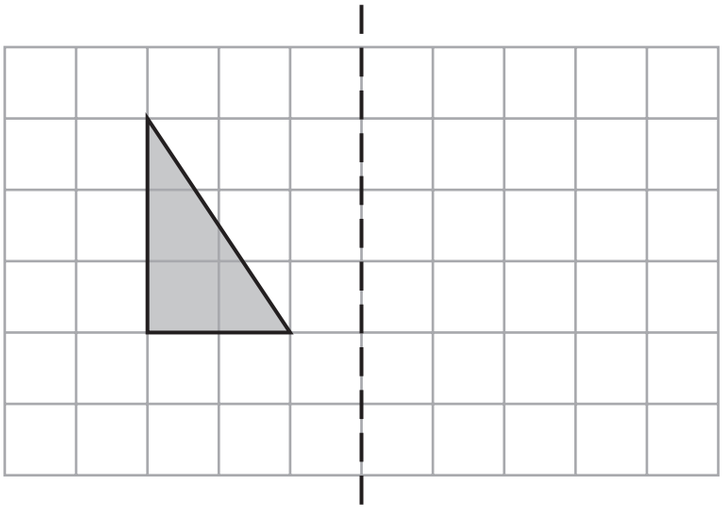
9



(a) On the grid above, draw a triangle with one right angle and exactly one line of symmetry.

(2)

(b) On the grid below, reflect the shaded shape in the mirror line.



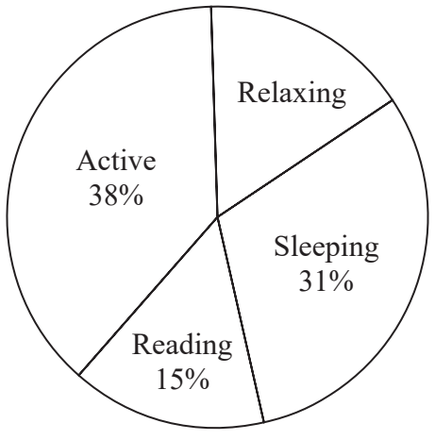
mirror line

(2)

(Total for Question 9 is 4 marks)

10 During one 24-hour period, Sid spent his time relaxing, sleeping, reading or being active.

The pie chart shows some information about the length of time Sid spent doing these different activities.



(a) Work out the percentage of the 24 hours that Sid spent relaxing.

.....%

(2)

(b) Work out how many of the 24 hours Sid spent reading.

..... hours

(2)

Sid says,

"I spent more than one third of the 24 hours sleeping."

(c) Is Sid correct?
Give a reason for your answer.

.....

.....

.....

(1)

(Total for Question 10 is 5 marks)

11 Sweets are sold in tubes.

There are 15 sweets in a tube.

Adam buys t tubes of sweets.

(a) Write down an expression, in terms of t, for the total number of sweets Adam buys.

.....

(1)

$p = 3r + 2$

(b) Work out the value of r when $p = 17$

.....

(2)

(Total for Question 11 is 3 marks)

12 (a) Write $\frac{7}{50}$ as a decimal.

.....

(1)

(b) Write $\frac{3}{8}$ as a percentage.

.....%

(1)

(Total for Question 12 is 2 marks)

13 Write down an example to show that each of the following three statements is **not** correct.

(a) The sum of two odd numbers is always odd.

.....

(1)

(b) The product of two prime numbers is always odd.

.....

(1)

(c) The square of a number is always bigger than the number.

.....

(1)

(Total for Question 13 is 3 marks)

14 The accurate scale drawing shows the positions of two ships, *A* and *B*.

Scale 1 : 20 000

A ship *C* is on a bearing of 060° from ship *A*.
Ship *C* is also on a bearing of 310° from ship *B*.

(a) Mark the position of ship *C* with a cross (×) on the scale diagram.
Label the cross *C*.

(2)

(b) Work out the real distance between ship *A* and ship *B*.
Give your answer in kilometres.

..... kilometres
(3)

(Total for Question 14 is 5 marks)

15 (a) Solve $\frac{x}{3} = 2$

$x =$ .....

(1)

(b) Solve $3(y - 5) = 21$

$y =$ .....

(2)

(Total for Question 15 is 3 marks)

16 Beena has a holiday in a villa in France.
The total cost of her travel is £349

Beena is on holiday for 2 weeks.
The cost of the villa is 650 euros per week.

While on holiday, Beena has 7 art lessons.
The cost of each art lesson is 45 euros.

Using an exchange rate of 1.12 euros = £1

(a) work out the total cost of Beena's travel, villa and art lessons.
Give your answer in pounds (£).

£.....

(4)

(b) If there had been more euros to £1, how would this affect your answer to part (a)?

.....

.....

.....

(1)

(Total for Question is 16 is 5 marks)

17 Here are the ingredients needed to make 20 biscuits.

Makes 20 biscuits

500 g butter
240 g sugar
600 g flour

Amaya wants to make 50 biscuits.

(a) Work out how much sugar Amaya will need.

..... g

(2)

A recipe for pastry needs

225 g of flour
100 g of butter

(b) Write as a ratio the number of grams of flour to the number of grams of butter.
Give your ratio in its simplest form.

.....

(2)

(Total for Question 17 is 4 marks)

18 (a) Work out the reciprocal of 0.8

.....

(1)

(b) Work out $\dfrac{\sqrt{7.4 - 2.5^2}}{5.6 + 7.2}$

Write down all the figures on your calculator display.

.....

(2)

(Total for Question 18 is 3 marks)

19 In a box there are only red beads, green beads, yellow beads and pink beads.

The table shows each of the probabilities that, when a bead is taken at random from the box, the colour of the bead is red or is green.

Colour	red	green	yellow	pink
Probability	0.16	0.2		

The number of yellow beads is the same as the number of pink beads.

Vera is going to take at random one bead from the box and put the bead back in the box.

(a) Work out the probability that Vera will take a pink bead.

.....

(2)

Cathy is going to take a bead from the box.
She will record the colour of the bead and put the bead back in the box.
Cathy will do this 50 times.

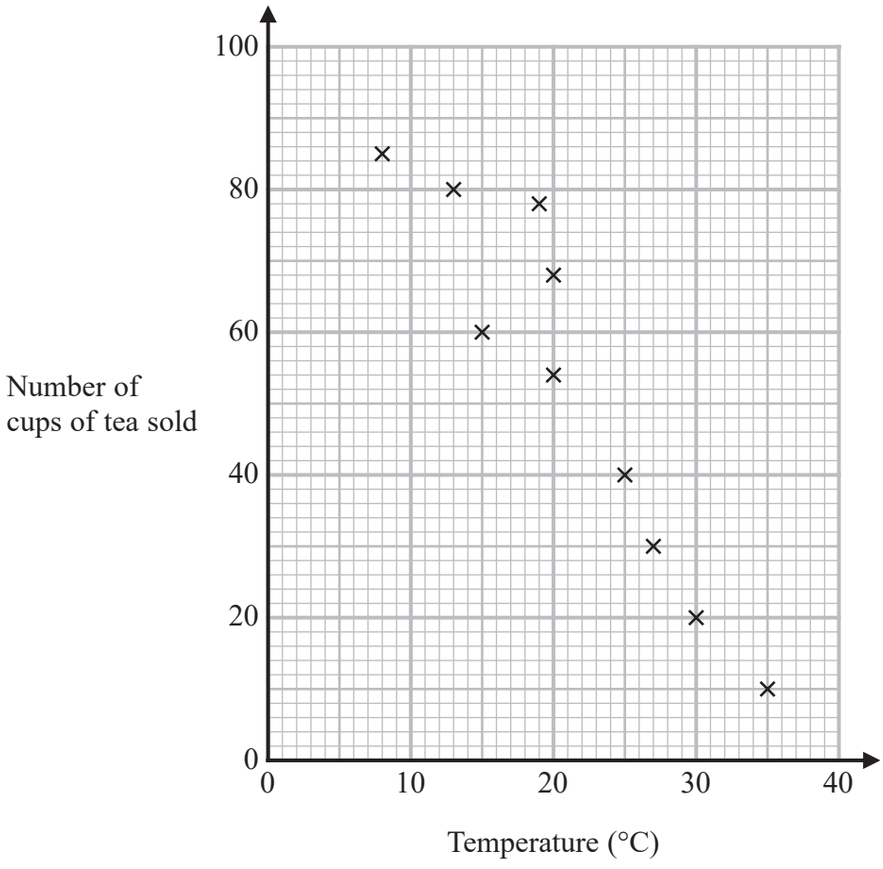
(b) Work out an estimate for the number of times she will take a red bead from the box.

.....

(2)

(Total for Question 19 is 4 marks)

20 The scatter graph shows information about the number of cups of tea sold by a cafe each day and the temperature at noon that day.



On a different day 46 cups of tea were sold and the temperature at noon was 22°C

(a) Show this information on the scatter graph.

(1)

(b) What type of correlation does the scatter graph show?

.....

(1)

On a Tuesday the temperature at noon is expected to be 10°C

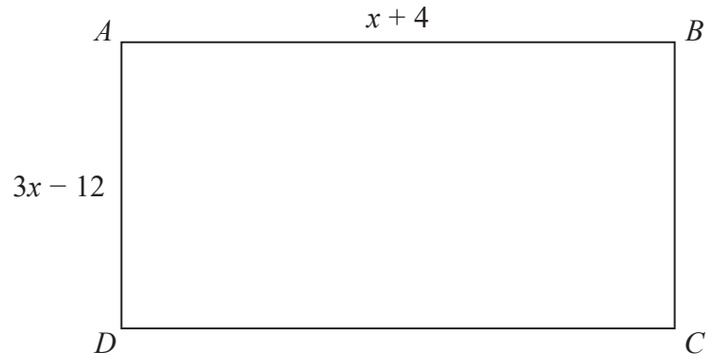
(c) Using the scatter graph, find an estimate for the number of cups of tea the cafe can expect to sell on this Tuesday.

.....

(2)

(Total for Question 20 is 4 marks)

21 *ABCD* is a rectangle.



All measurements are in centimetres.

The perimeter of the rectangle is 38 cm.

(a) Work out the length of *AD*.

..... cm

(4)

Jamal says,

"If I double the value of *x* then the perimeter of the rectangle will double."

(b) Is Jamal correct?
You must give a reason for your answer.

.....

.....

.....

(1)

(Total for Question 21 is 5 marks)

22 Here are the equations of five straight lines.

$y = 3$ $y = 3x + 2$ $3y = x + 2$ $x = 3$ $x + 3y = 2$

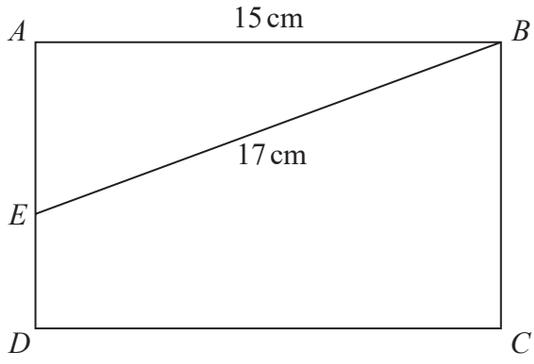
Each of these straight lines is parallel to the x-axis or is parallel to the y-axis or has a positive gradient or has a negative gradient.

Complete the following table by placing a tick (✓) in the correct column for each equation.

Equation	Line parallel to the x-axis	Line parallel to the y-axis	Line with positive gradient	Line with negative gradient
$y = 3$				
$y = 3x + 2$				
$3y = x + 2$				
$x = 3$				
$x + 3y = 2$				

(Total for Question 22 is 3 marks)

23 $ABCD$ is a rectangle.



E is the point on AD such that $AE : ED = 4 : 3$

Work out the area of the rectangle.

..... cm^2

(Total for Question 23 is 5 marks)

24 The mass of $\frac{1}{2}$ pint of milk is 303 g.

1 pint is 0.568 litres
1000 cm^3 = 1 litre

Work out the density of the milk.
Give your answer in g/cm^3

..... g/cm^3

(Total for Question 24 is 3 marks)

25 (a) Write 16 in the form 2^n

.....

(1)

(b) Write $5^2 \times 5^{-7} \times 5^3$ in the form 5^m

.....

(2)

(Total for Question 25 is 3 marks)

26 Solve the simultaneous equations

$$x + 2y = 4$$
$$2x - 2y = 5$$

$x =$ .....

$y =$ .....

(Total for Question 26 is 3 marks)

TOTAL FOR PAPER IS 80 MARKS