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 | | | | |

Thursday 6 June 2019

Morning (Time: 1 hour 30 minutes) | Paper Reference **1MA1/2F**

Mathematics

Shadow Set 1

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.
- 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 Write 0.65 as a fraction.

.....

(Total for Question 1 is 1 mark)

---

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

–5 6 0 –3 4

.....

(Total for Question 2 is 1 mark)

---

3 Write down two factors of 20

.....

(Total for Question 3 is 1 mark)

---

4 Change 1656 grams to kilograms.

.....kg

(Total for Question 4 is 1 mark)

---

5 Write the number three million in figures.

.....

(Total for Question 5 is 1 mark)

---

6 Hadi goes into a cafe and buys 2 cups of coffee and a piece of cake.

Each cup of coffee costs £2.85
The cake costs £2.70

Hadi pays with a £10 note.

He thinks he will get more than £1.70 in change.

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

(Total for Question 6 is 3 marks)

---

7 There are y vans on a road.
There are 5 people in each van.

Write an expression, in terms of y, for the total number of people in the vans.

.....

(Total for Question 7 is 1 mark)

---

8 (*a*) Simplify $x \times y \times 9$

.....

(1)

(*b*) Simplify $x \times x \times x$

.....

(1)

(*c*) Simplify fully $\dfrac{x \times x \times x \times y}{x \times x \times y \times y}$

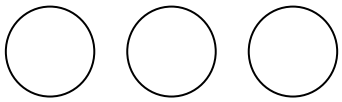
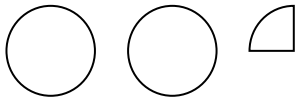
.....

(2)

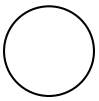
(Total for Question 8 is 4 marks)

---

9 The pictogram shows information about the number of vinyl records sold in a shop on Monday and on Tuesday.

Monday	
Tuesday	
Wednesday	
Thursday	

Key:



represents
16 vinyl records

(*a*) Write down the number of vinyl records sold

(i) on Monday,

.....

(1)

(ii) on Tuesday.

.....

(1)

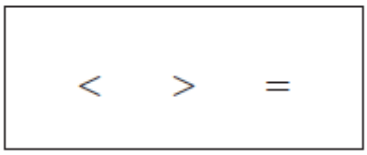
On Wednesday and Thursday a total of 48 vinyl records were sold.
The number of records sold on Thursday was 5 times the number of records sold on Wednesday.

(*b*) Use this information to complete the pictogram.

(3)

(Total for Question 9 is 5 marks)

10 Here are three symbols.



Write one of these symbols in each box to make four true statements.

21		28
5 + 8		104 − 91
2^3		$2 \times 2 \times 2$
−4		−6

(Total for Question 10 is 2 marks)

---

11 $P = 9r + 5q$

Work out the value of P when $r = 5$ and $q = -4$

.....

(Total for Question 11 is 2 marks)

---

12 Here is part of a train timetable.

Brighton	08 22	08 29	08 32
London	10 00	09 32	09 48

Nadine gets to the station in Brighton at 08 15

(*a*) Work out how many minutes she has to wait until 08 22

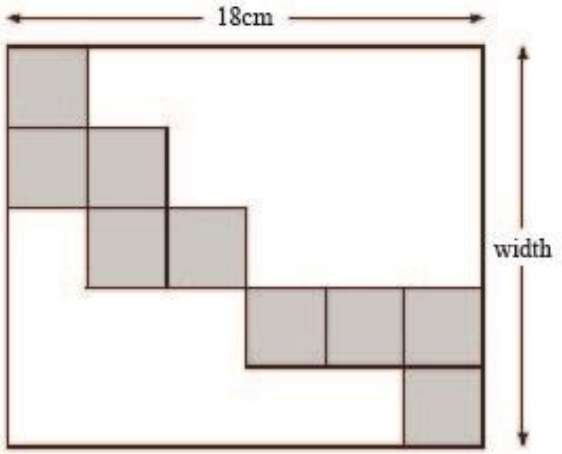
..... minutes
(1)

(*b*) Work out how long it will take the 08 22 train to get to London.

.....
(2)

(Total for Question 12 is 3 marks)

13 The diagram shows nine identical squares inside a rectangle.



The length of the rectangle is 18 cm.

Work out the width of the rectangle.

.....cm

(Total for Question 13 is 3 marks)

14 Write the ratio 9 : 4.5 in the form n : 1

.....

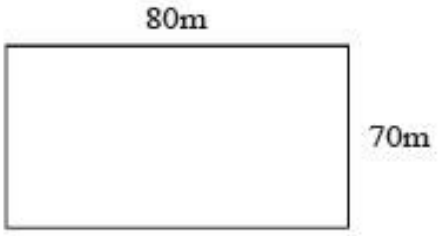
(Total for Question 14 is 1 mark)

---

15 A garden is in the shape of a rectangle 80 m by 70 m.

Flowers are grown in 40% of the garden.
The rest of the garden is grass.

Work out the area of the garden that is grass.



.....m^2

(Total for Question 15 is 4 marks)

---

16 Four biased coins, A, B, C and D are thrown.
The probability that each coin will land on Heads is shown in the table.

Coin	Probability
A	0.44
B	0.044
C	$\frac{1}{4}$
D	40%

(*a*) (i) Which coin is least likely to land on Heads?

.....

(1)

(ii) Which coin is most likely to land on Heads?

.....

(1)

Sahron says,

> "The probability that coin C will land on Heads is the same as the probability that coin C will land on Tails."

(*b*) Is she correct?
Give a reason for your answer.

.....

.....

.....

(1)

Coin B is going to be thrown 4000 times.

(*c*) Work out an estimate for the number of times coin B will land on Heads.

.....

(2)

(Total for Question 16 is 5 marks)

17 There are 300 calories in 100 g of sausages.
There are 540 calories in 100 g of bacon.

Raymond has 60 g of sausages and 150 g of bacon for lunch.

Work out the total number of calories in this lunch.

.....

(Total for Question 17 is 4 marks)

18 Machine A and machine B both make car parts.

Machine A makes 8 parts every 10 minutes.
Machine B makes 17 parts every 15 minutes.

On Monday
machine A makes parts for 12 hours
machine B makes parts for 10 hours

Work out the total number of parts made by the two machines on Monday.

.....

(Total for Question 18 is 4 marks)

19 Here is a plan of a kitchen drawn to a scale of 1 : 20

Scale 1 : 20

Sheena is going to put a small table in the kitchen.

The table has to be
more than 120 cm from *A*
more than 100 cm from *BC*

Show, by shading on the diagram, the region where Sheena can put the table.

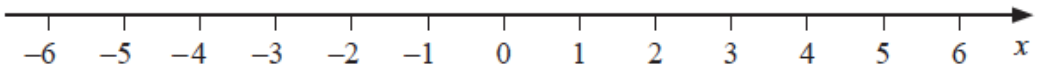
(Total for Question 19 is 4 marks)

20 (*a*) Solve $16n > 13n + 9$

.....

(2)

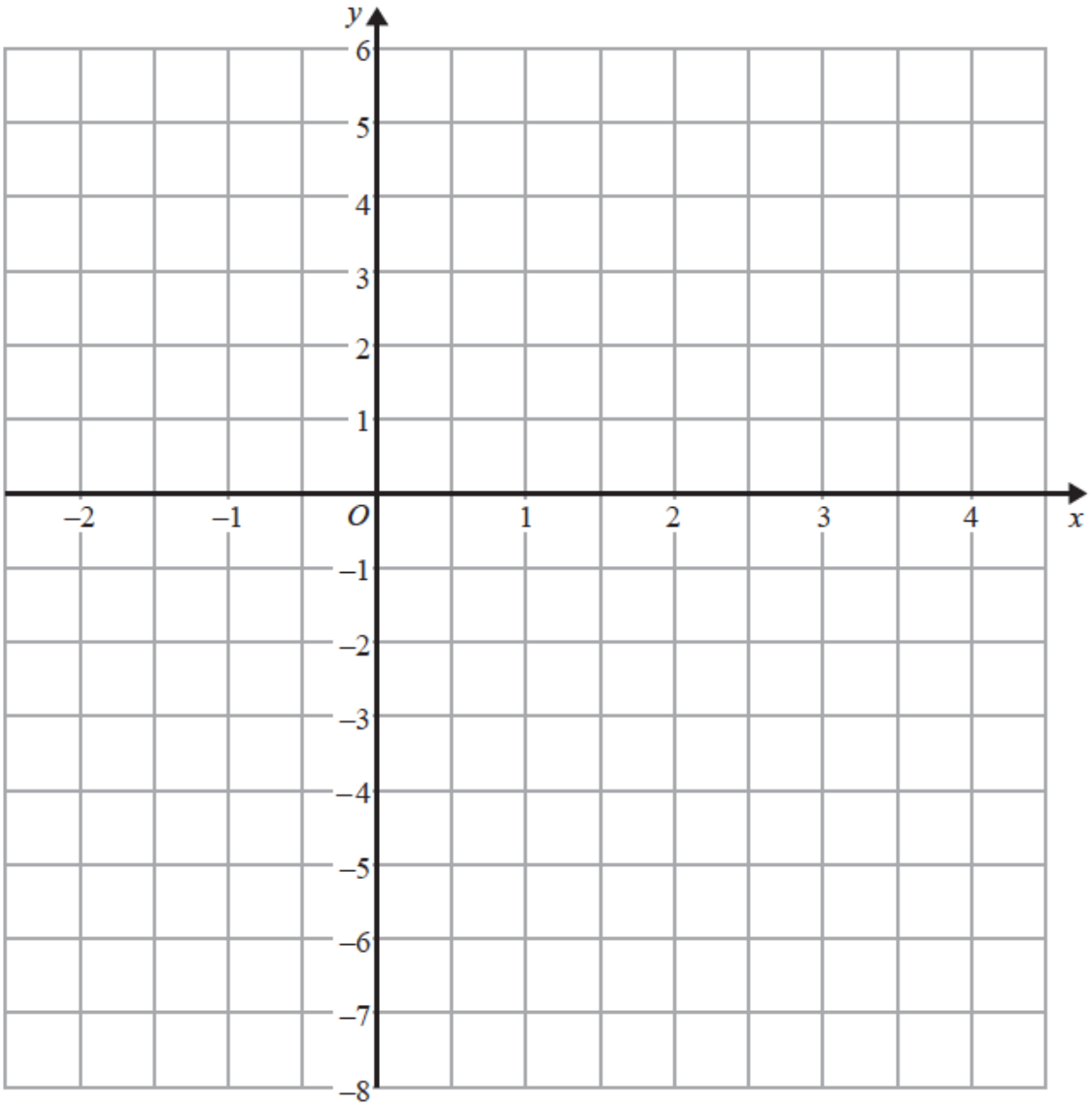
(*b*) On the number line below, show the set of values of x for which $-3 < x + 3 \leqslant 5$



(3)

(Total for Question 20 is 5 marks)

21 On the grid below, draw the graph of $y = 2x - 2$ for values of x from -2 to 4



(Total for Question 21 is 3 marks)

22 Naomi is planning a day trip for 165 students.

She asks a sample of 30 students where they want to go.
Each student chooses one place.

The table shows information about her results.

Place	Number of students
Theme Park	10
Theatre	5
Sports Centre	8
Seaside	7

(i) Work out how many of the 165 students you think will want to go to the Theme Park.

.....

(2)

(ii) State any assumption you made **and** explain how this may affect your answer.

.....

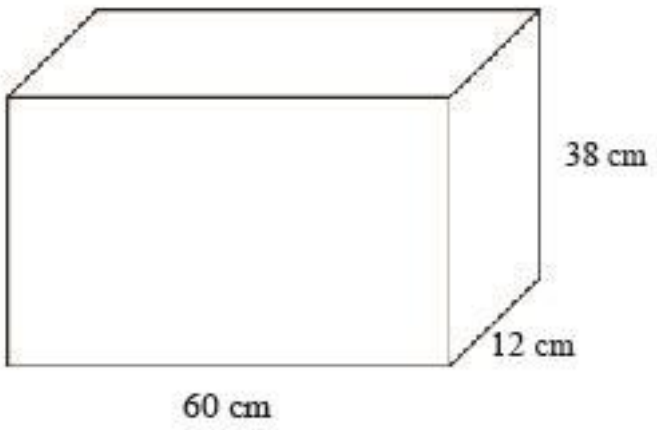
.....

.....

(1)

(Total for Question 22 is 3 marks)

23 A container is in the shape of a cuboid.



The container is $\frac{2}{3}$ full of water.

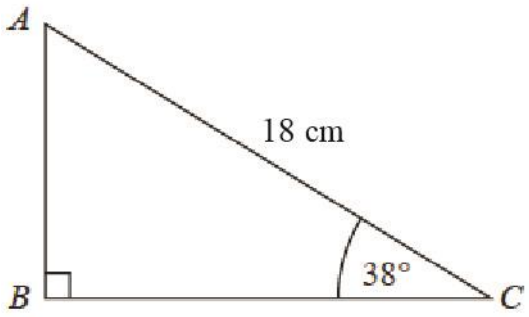
A cup holds 275 m*l* of water.

What is the greatest number of cups that can be completely filled with water from the container?

.....

(Total for Question 23 is 4 marks)

24 *ABC* is a right-angled triangle.



Calculate the length of *AB*.
Give your answer correct to 2 decimal places.

.....cm

(Total for Question 24 is 2 marks)

---

25 Jenna used her calculator to work out the value of a number *y*.

The answer on her calculator display began

9.5

Complete the error interval for *y*.

..... ≤ *y* < .....

(Total for Question 25 is 2 marks)

---

26 £450 is shared between Amanda, Bernard, Colleen and Dawn.

The ratio of the amount Amanda gets to the amount Bernard gets is 2 : 7

Colleen and Dawn each get 1.5 times the amount Amanda gets.

Work out the amount of money that Bernard gets.

£.....

(Total for Question 26 is 4 marks)

---

27 (*a*) Write 0.00467 in standard form.

.....

(1)

(*b*) Write 1.547×10^3 as an ordinary number.

.....

(1)

(Total for Question 27 is 2 marks)

---

28 Here are the first five terms of a Fibonacci sequence.

4 4 8 12 20

(*a*) Write down the next two terms of the sequence.

..... , ...

(1)

The first three terms of a different Fibonacci sequence are

$2a$ $2a$ $4a$

(*b*) Find the 6th term of this sequence.

.....

(2)

(Total for Question 28 is 3 marks)

---

29 $\mathbf{a} = \begin{pmatrix} 6 \\ 5 \end{pmatrix}$ $\mathbf{b} = \begin{pmatrix} 5 \\ 2 \end{pmatrix}$

Work out $\mathbf{a} - 2\mathbf{b}$ as a column vector.

$\begin{pmatrix} \text{---} \\ \text{---} \end{pmatrix}$

(Total for Question 29 is 2 marks)

TOTAL FOR PAPER IS 80 MARKS