

Please check the examination details below before entering your candidate information

Candidate surname					Other names				
Centre Number				Candidate Number					
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Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Time 1 hour 30 minutes

Paper reference **1MA1/1F**

Mathematics

PAPER 1 (Non-Calculator)

Foundation Tier

Shadow Set 1

<p>You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser. Tracing paper may be used.</p>	Total Marks
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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
- 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 $\frac{7}{10}$ as a percentage.

.....%

(Total for Question 1 is 1 mark)

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

9 -6 -8 2 0 -3

.....

(Total for Question 2 is 1 mark)

3 Write $\frac{7}{100}$ as a decimal.

.....

(Total for Question 3 is 1 mark)

4 Write 486 correct to the nearest ten.

.....

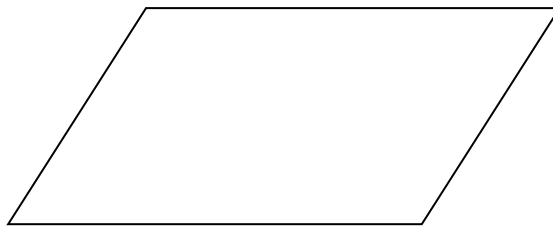
(Total for Question 4 is 1 mark)

5 Write down the value of 9^2

.....

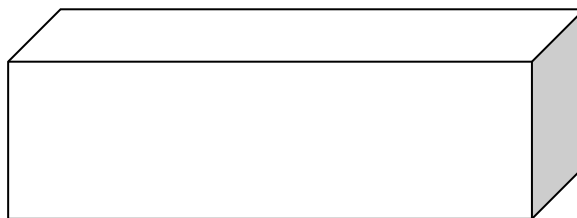
(Total for Question 5 is 1 mark)

6 (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 6 is 2 marks)

7 £51 is shared equally between 3 shopkeepers.

How much does each shopkeeper get?

£.....

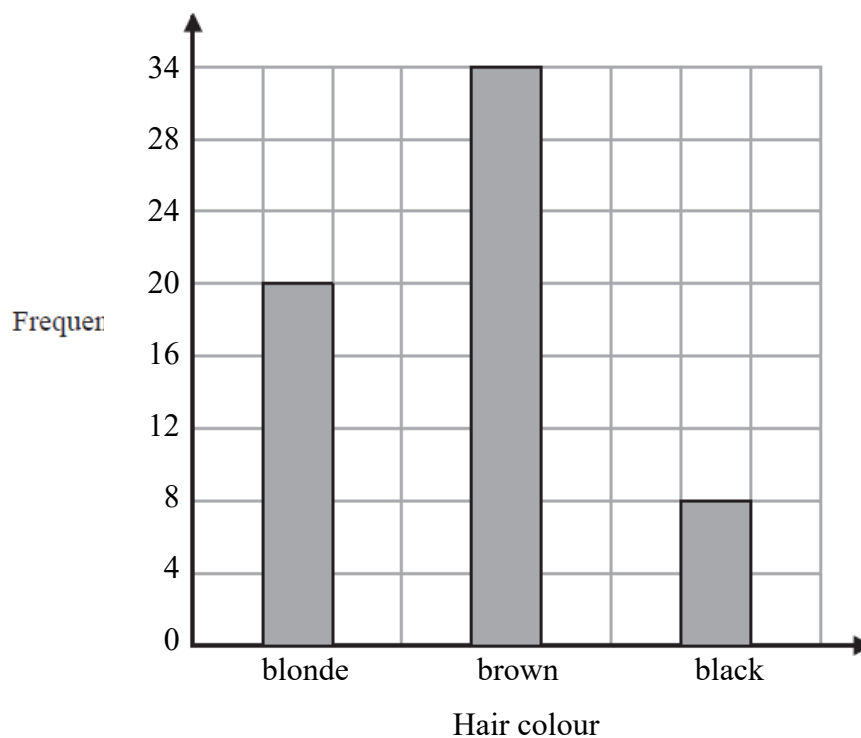
(Total for Question 7 is 2 marks)

8 Gillian recorded the hair colour of each of the women in her hairdressing salon.

The frequency table below shows her results.

Hair colour	Frequency
blonde	20
brown	34
black	8

Gillian then drew the bar chart below for this information.



Write down one thing that is wrong with this bar chart.

.....

.....

.....

(Total for Question 8 is 1 mark)

9 Dinesh buys,

- 1 sandwich for £4.50
- 1 bottle of cola for 70p
- 2 packets of crisps for £1.30 each packet

Dinesh pays with a £10 note.

He says,

“I should get £2.20 change.”

Is Dinesh correct?

You must show how you get your answer.

(Total for Question 9 is 3 marks)

10 Rosanna records the temperature in her greenhouse at noon each day.

On Friday, the temperature was 6°C .

On Saturday, the temperature was 12° less than the temperature on Friday.

On Sunday, the temperature was 4° greater than the temperature on Saturday.


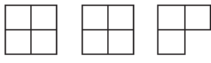
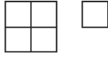
Find the difference between the temperature on Friday and the temperature on Sunday.


You must show all your working.

..... $^{\circ}\text{C}$

(Total for Question 10 is 2 marks)

- 11 The pictogram shows information about the number of shrubs sold in a garden centre on Tuesday, Wednesday and Thursday.

Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

Key:  represents 12 shrubs

- (a) How many shrubs were sold on Tuesday?

.....
(1)

More shrubs were sold on Wednesday than on Thursday.

- (b) How many more?

.....
(2)

On Friday and Saturday, a total of 36 shrubs were sold in the garden centre.

$\frac{1}{3}$ of these 36 shrubs were sold in the shop on Friday.

- (c) Complete the pictogram for Friday and Saturday.

(3)

(Total for Question 11 is 6 marks)

12 There are two clubs in a town.

In one club there are 36 men and 54 women.

In the other club, $\frac{4}{9}$ of the members are men and the rest of the members are women.

Alice says,

“The ratio of the number of men to the number of women is the same for both clubs.”

Is Alice correct?

You must show how you get your answer.

(Total for Question 12 is 3 marks)

13 A number sequence starts 2 4 8

Eloise says that the next term is 14

(a) Explain why Eloise may be correct.

.....
.....
.....

(1)

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

1 3 6 10

(b) Find the 9th term of this sequence.

.....
(2)

(Total for Question 13 is 3 marks)

- 14** 5 kg of potatoes cost £3.50
7 kg of potatoes and 2 kg of turnips cost a total of £9.50

Work out the total cost of 9 kg of potatoes and 3 kg of turnips.
You must show all your working.

£.....
(Total for Question 14 is 4 marks)

15 (a) Expand $5(g + h)$

.....
(1)

(b) Factorise $8x^2 - 7x$

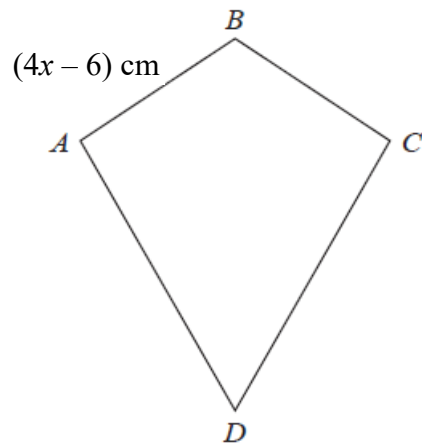
.....
(1)

(c) Solve $6x - 9 = 39$

$x =$
(2)

(Total for Question 15 is 4 marks)

16 $ABCD$ is a kite.



$$AB = (4x - 6) \text{ cm}$$

Amar says that x could be 1.5

(a) Explain why Amar cannot be correct.

.....
.....
.....

(1)

$$AD = 2AB$$

The kite has a perimeter of 60 cm.

(b) Find the value of x .

$$x = \text{.....} \quad (3)$$

(Total for Question 16 is 4 marks)

17 Harry wants to make some biscuits using this recipe.

Makes 16 biscuits
150 g butter
200 g flour
50 g sugar

Harry thinks that he has

- 450 g butter
- 800 g flour
- 200 g sugar

Assuming that these weights are correct,

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

.....
(4)

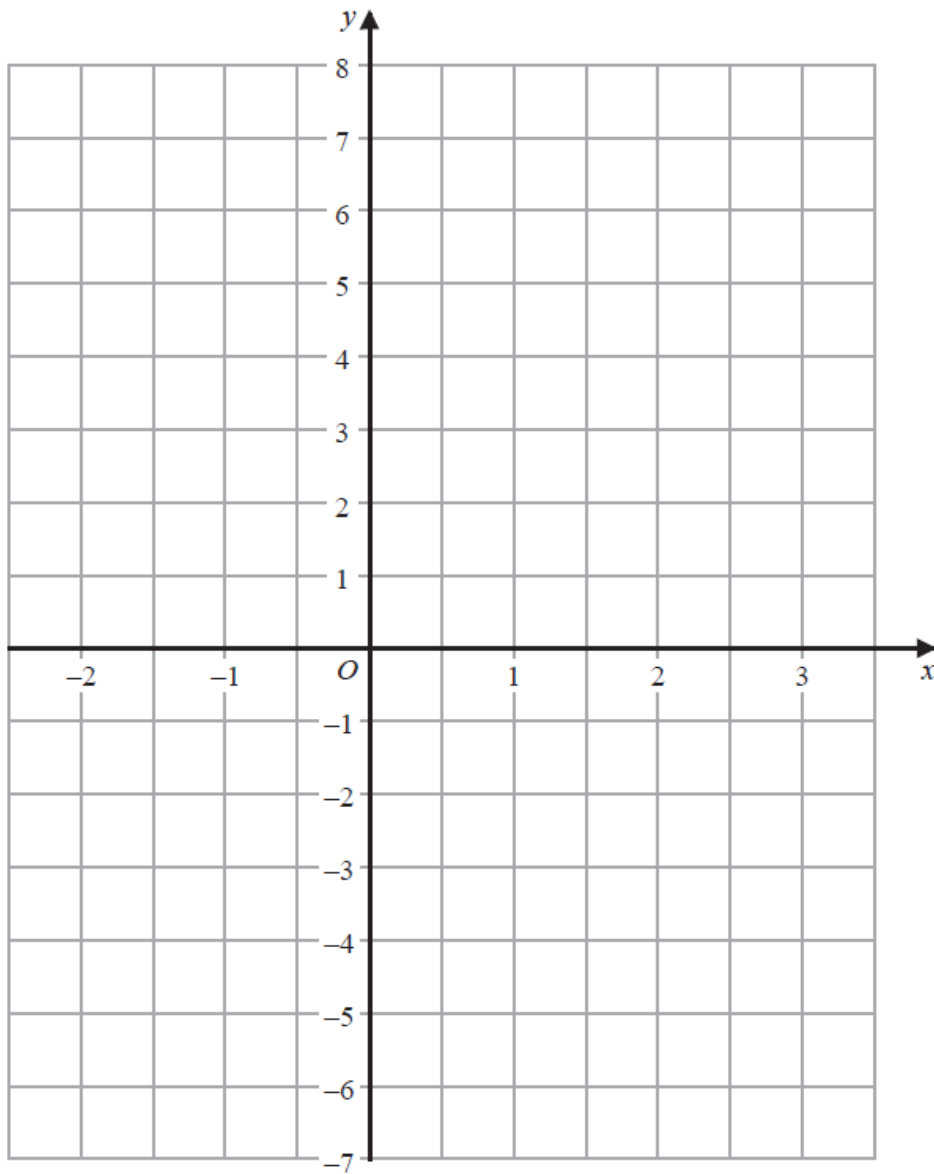
Harry is wrong.
He has more than 600 g of butter.

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

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

(Total for Question 17 is 5 marks)

18 On the grid below, draw the graph of $y = 3x - 1$ for values of x from -2 to 3



(Total for Question 18 is 3 marks)

- 19** Janice buys a pair of headphones for £75
She sells the headphones for £60

Work out her percentage loss.

.....%

(Total for Question 19 is 3 marks)

20 (a) Work out 4.66×4.9

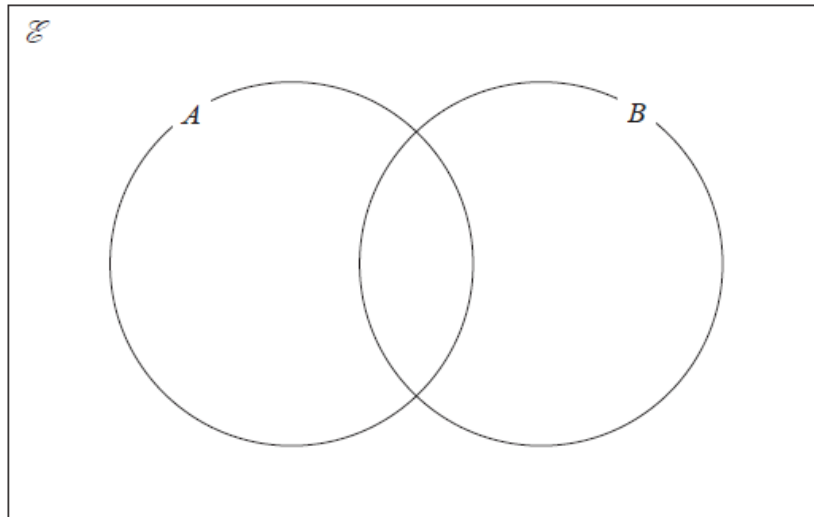
.....
(3)

(b) Work out $77.22 \div 1.8$

.....
(3)

(Total for Question 20 is 6 marks)

- 21 $\mathcal{E} = \{\text{odd numbers between 0 and 21}\}$
 $A = \{7, 13, 19, 21\}$
 $B = \{3, 7, 15, 19\}$
Complete the Venn diagram for this information.



(Total for Question 21 is 3 marks)

- 22 Work out $3\frac{2}{5} - 1\frac{2}{3}$

Give your answer as a mixed number.

.....
(Total for Question 22 is 3 marks)

23 At the end of 2017
the value of Tom's car was £25 000
the value of Jim's car was £16 000

At the end of 2020
the value of Tom's car had decreased by 30%
the value of Jim's car had increased by 10%

At the end of 2020, whose car had the greater value?
You must show how you get your answer.

(Total for Question 23 is 4 marks)

24 Jane, Katie and Lucy grow tomatoes.

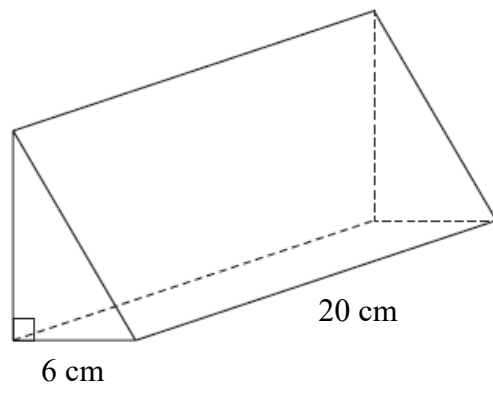
$$\begin{array}{ccccccc} \text{number of} & & & \text{number of} & & \text{number of} & \\ \text{tomatoes Jane has} & : & & \text{tomatoes Katie has} & : & \text{tomatoes Lucy has} & = 3 : 8 : 14 \end{array}$$

Lucy has 30 more tomatoes than Katie.

Lucy has more tomatoes than Jane.
How many more?

.....
(Total for Question 24 is 3 marks)

25 The diagram shows a prism.



The cross section of the prism is a right-angled triangle.
The base of the triangle has length 6 cm

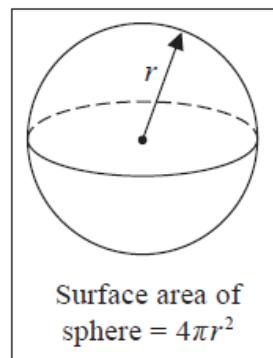
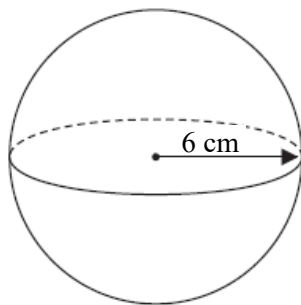
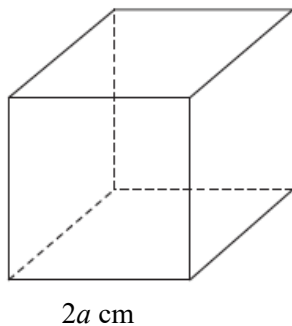
The prism has length 20 cm
The prism has volume 600 cm^3

Work out the height of the prism.

..... cm

(Total for Question 25 is 3 marks)

26 The diagram shows a cube with edges of length $2a$ cm and a sphere of radius 6 cm.



The surface area of the cube is equal to the surface area of the sphere.

Show that $a = \sqrt{k\pi}$ where k is an integer.

(Total for Question 26 is 4 marks)

27 Fergus measured the length of a girder as 6.3 m correct to 1 decimal place.

Complete the error interval for the length, p cm, of the girder.

$$\dots \leq p < \dots$$

(Total for Question 27 is 2 marks)

28 The equation of a straight line **P** is $y = 5 - 2x$

(i) Write down the gradient of **P**.

.....
(1)

(ii) Write down the coordinates of the point where **P** crosses the y -axis.

(..... ,)
(1)

(Total for Question 28 is 2 marks)

TOTAL FOR PAPER IS 80 MARKS

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