Write your name here

Surname		Other names

Centre Number | | | | | Candidate Number | | | |

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

Mathematics
Paper 2 (Calculator)
Aiming for 4

Foundation Tier

Spring 2019 Practice Paper
Time: 1 hour 30 minutes

Paper Reference
1MA1/2F

Total Marks

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.

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. There are 38 questions.
- 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   Solve $x + x + x = 51$

$x =$ ....

(Total for Question 1 is 1 mark)

2   Write down a multiple of 6 that is between 40 and 50.

....

(Total for Question 2 is 1 mark)

3   Work out the cube root of 64

....

(Total for Question 3 is 1 mark)

4   Work out the value of 3^5.

....

(Total for Question 4 is 1 mark)

5   60 students were asked how they get to school.

The table shows the results.

	Bus	**Walk**	**Car**	**Bicycle**
Number of students	15	27	12	6

What fraction of the 60 students did **not** walk to school?

....

(Total for Question 5 is 2 marks)

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6   (*a*) Simplify $t \times t$

....
(1)

(*b*) Simplify $3f \times 5g$

....
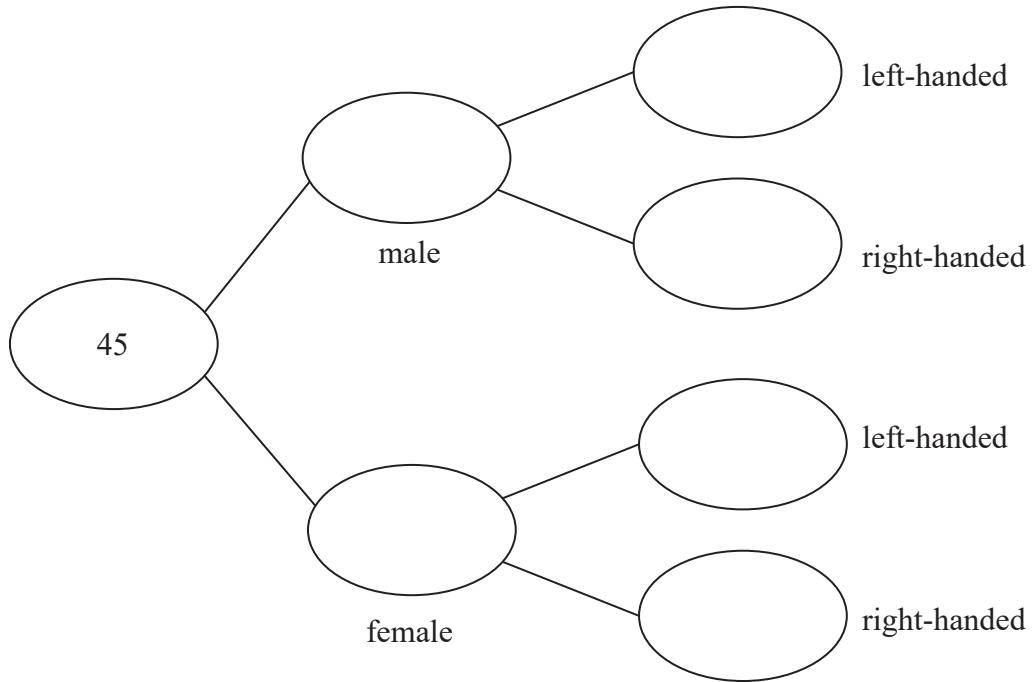**(1)**

(Total for Question 6 is 2 marks)

7 Each worker in a factory is either left-handed or right-handed.

22 of the 45 workers are male.
16 of the 34 right-handed workers are female.

Complete the frequency tree for this information.

(Total for Question 7 is 3 marks)

8   Ellie makes hats.
She makes at least 17 hats per hour.
She is paid 46p for each hat she makes.

Reaze is a waiter.
He works 35 hours and is paid a total of £266.

Show that Ellie's hourly rate of pay is more than Reaze's hourly rate of pay.

(Total for Question 8 is 3 marks)

9 Emily drives 186 miles in 3 hours.

(*a*) What is her average speed?

.... mph
(2)

Sarah drives at an average speed of 58 mph for 4 hours.

(*b*) How many miles does Sarah drive?

.... miles
(2)

(**Total for Question 9 is 4 marks**)

10 Neil buys 30 pens, 30 pencils, 30 rulers and 30 pencil cases.

Price list	
pens	6 for 82p
pencils	15 for 45p
rulers	10 for £1.25
pencil cases	37p each

What is the total amount of money Neil spends?

£...

(**Total for Question 10 is 5 marks**)

11 Write $\dfrac{7}{100}$ as a decimal.

....

(Total for Question 11 is 1 mark)

12 Solve $\dfrac{y}{4} = 3$

$y = $ ....

(Total for Question 12 is 1 mark)

13   Here is a map of an island.

Diagram accurately drawn

Scale: 1 cm represents 0.5 km
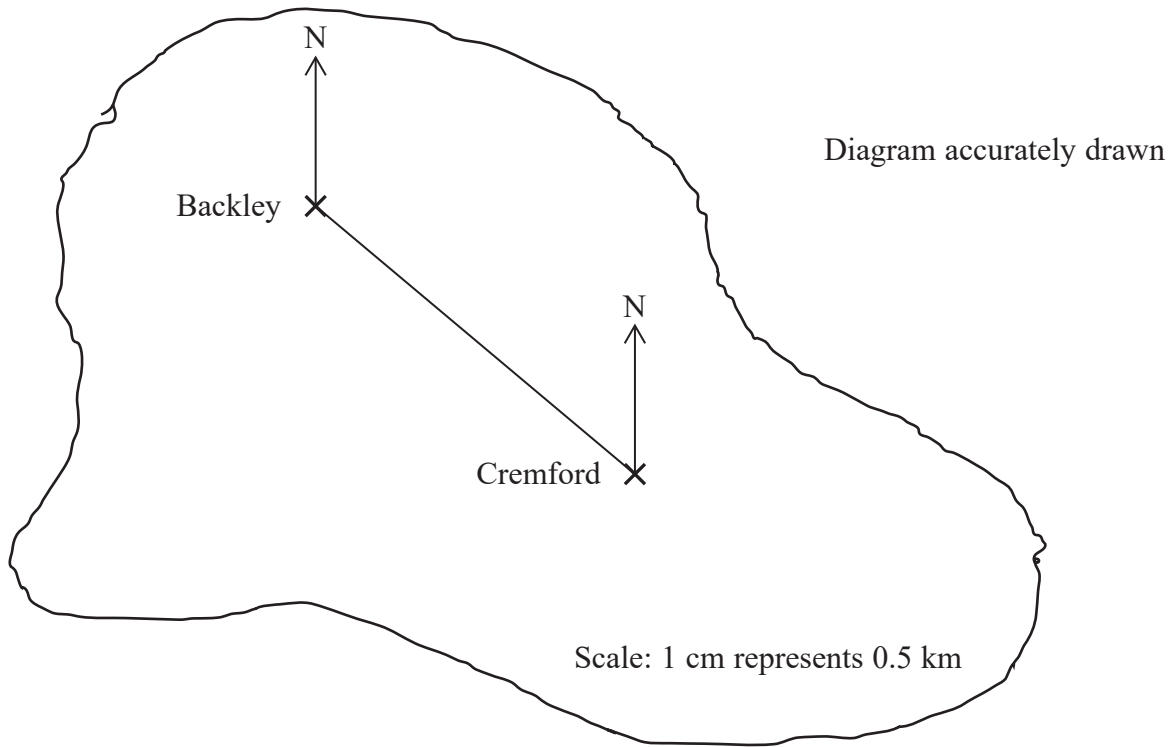
A straight road joins the two villages, Backley and Cremford.

Work out the real distance between the two villages.

....km

(Total for Question 13 is 2 marks)

14   Solve $2f + 7 = 18$

$f =$ ....

(Total for Question 14 is 1 mark)

15   Ken buys some fruit.

He buys apples, bananas, peaches and oranges.

Ken buys

       4 apples   weighing 125 g each
       2 bananas   weighing 170 g each
       3 peaches   weighing 135 g each

Each orange has a weight of 90 g.

The fruit has a total weight of 1.785 kg.

Work out how many oranges Ken buys.

....

(Total for Question 15 is 3 marks)

---

16   Write down a 6 digit number that has 4 as its thousands digit.
You can only use the digit 4 once.

....

(Total for Question 16 is 1 mark)

---

17   Margaret is thinking of a number.
She says,

"My number is odd. It is a factor of 36 and a multiple of 3"

There are two possible numbers Margaret can be thinking of.

Write down these two numbers.

....

(**Total for Question 17 is 3 marks**)

18 Mohsin, Yusuf and Luke are going to play a game.
At the end of the game, one of them will be in First place, one of them will be in Second place and one of them will be in Third place.
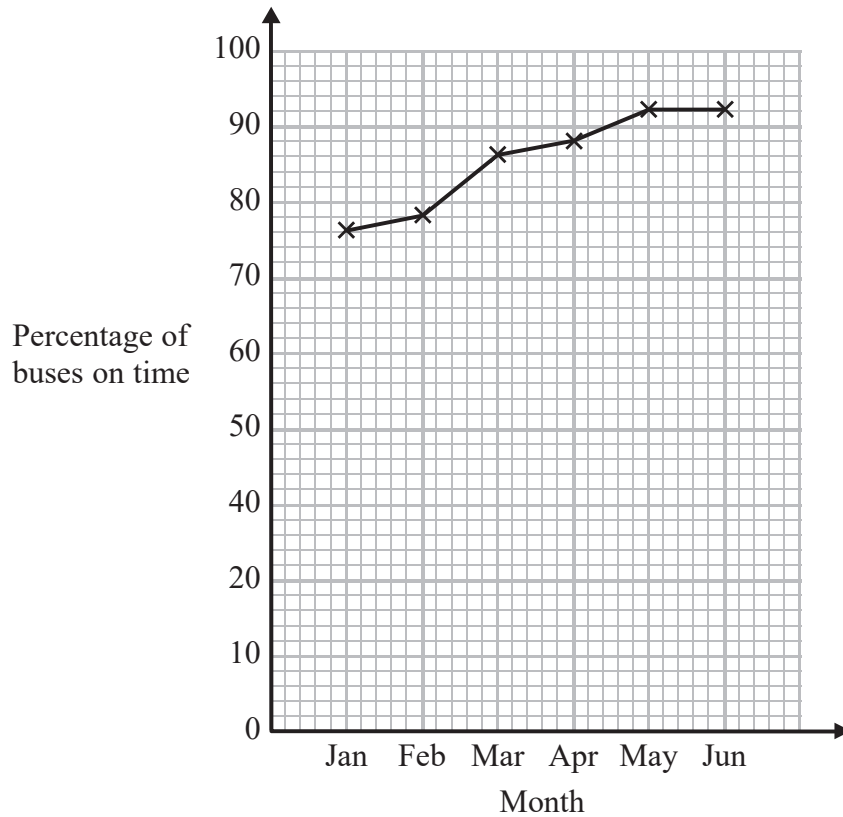
Use the table below to list all the possible outcomes of the game.

First place	Second place	Third place

(**Total for Question 18 is 2 marks**)

19 Chrissy drew this graph to show the percentage of buses that got to a bus stop on time for six months.

Describe the trend in the percentage of buses that got to the bus stop on time.

…..

(Total for Question 19 is 1 mark)

---

20 Simplify $m^3 \times m^4$

....

(Total for Question 20 is 1 mark)

---

21   *a* and *b* are odd numbers.
Give an example to show that the value of $2(a + b)$ is a multiple of 4.
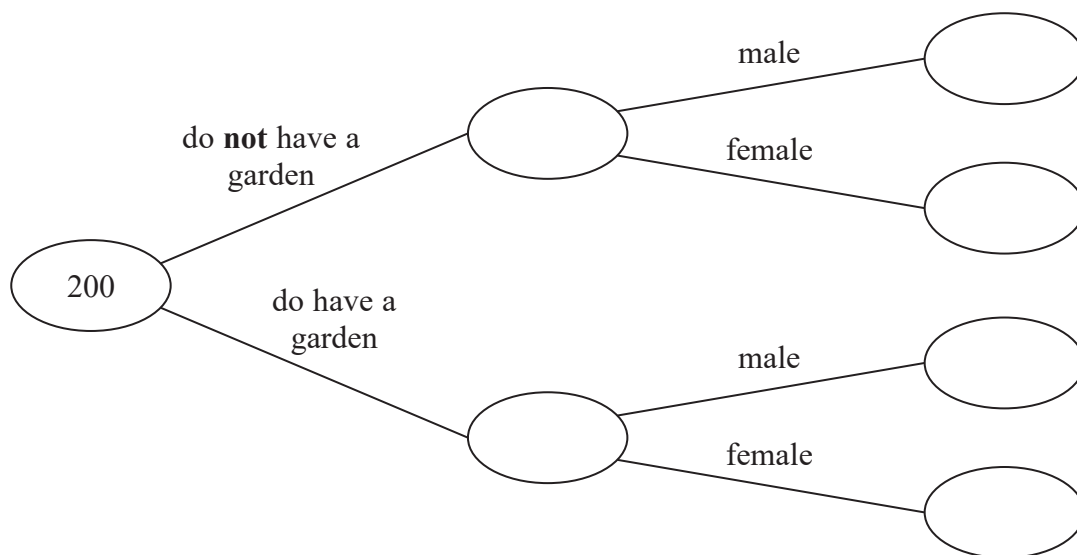
(Total for Question 21 is 2 marks)

22   Write 1.59 correct to 1 decimal place.

....
(Total for Question 22 is 1 mark)

23 200 people live in a village.

23 people do **not** have a garden.
10 males do **not** have a garden.
95 people are male.

(*a*) Use this information to complete the frequency tree.

(3)

One of the people who does **not** have a garden is chosen at random.

(*b*) Write down the probability that this person is female.

....
(2)

(Total for Question 23 is 5 marks)

24 Marla buys some bags of buttons.

There are 19 buttons or 20 buttons or 21 buttons or 22 buttons in each bag.

The table gives some information about the number of buttons in each bag.

Number of buttons	Frequency
19	………......……
20	7
21	3
22	1

The total number of buttons is 320.

Complete the table.

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

25 Change 35 cm to mm.

.... mm

(**Total for Question 25 is 1 mark**)

26 Write $\dfrac{4}{50}$ as a percentage.

....%

(Total for Question 26 is 1 mark)

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27 $(7^2)^y = 7^{10}$

Find the value of y.

$y =$ ....
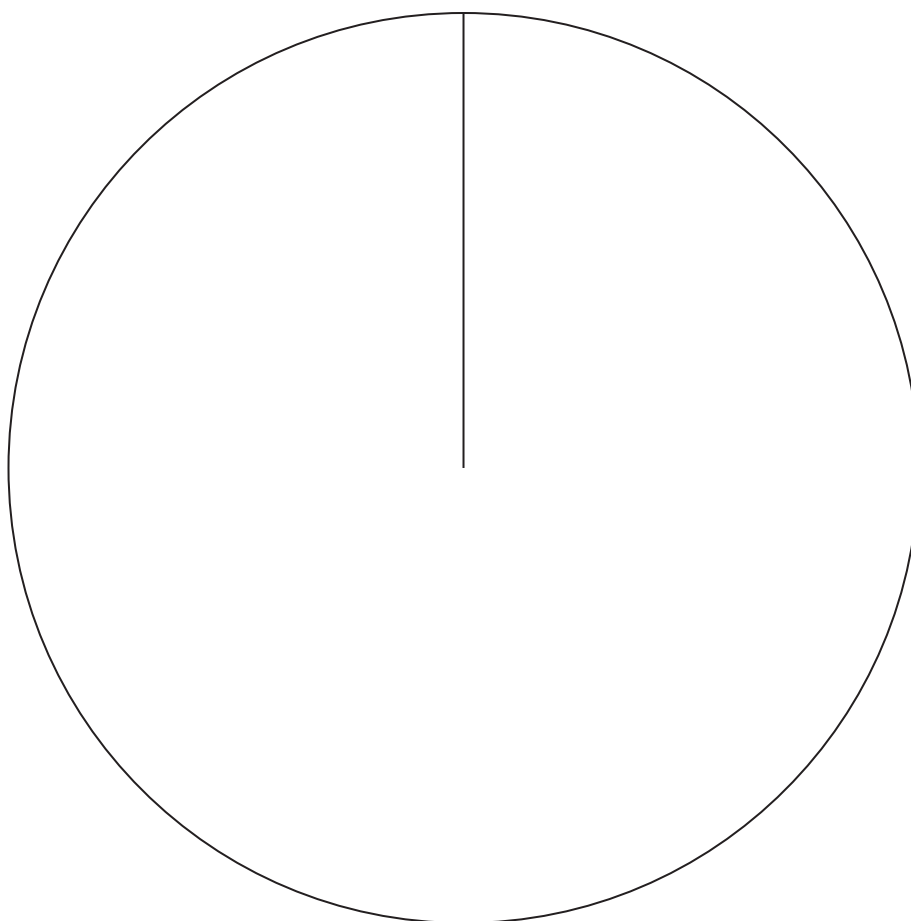
(Total for Question 27 is 1 mark)

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28 A group of football fans were asked what their half time snack was.
The table below gives information about their answers.

Snack	Number of fans
burger	11
pie	17
hot dog	8

Draw an accurate pie chart for this information.

(**Total for Question 28 is 3 marks**)

29 Here is the list of ingredients for making 30 biscuits.

Ingredients for 30 biscuits

225 g   butter
110 g   caster sugar
275 g   plain flour
75 g   chocolate chips

Lucas has the following ingredients.

900 g   butter
1000 g   caster sugar
1000 g   plain flour
225 g   chocolate chips

What is the greatest number of biscuits Lucas can make?
You must show your working.

....

(Total for Question 29 is 3 marks)

30 Simplify $\dfrac{2n + 6n}{2}$

....

(Total for Question 30 is 1 mark)

31 Annie and Lily share some money in the ratio   4 : 3
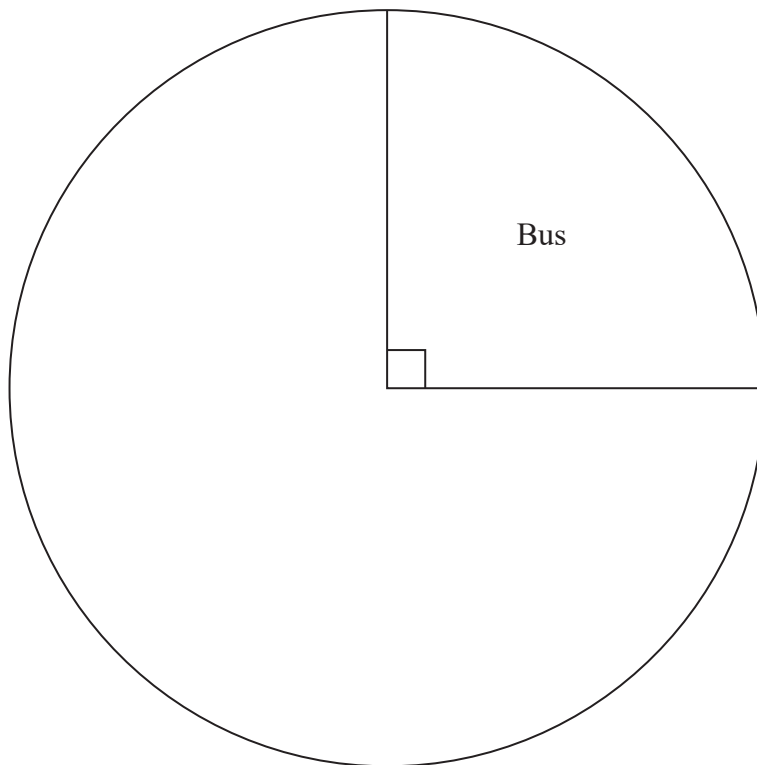
What fraction of the money does Lily get?

....

(Total for Question 31 is 1 mark)

---

32 60 students were asked how they get to school.

The table shows the results.

	Bus	**Walk**	**Car**	**Bicycle**
Number of students	15	27	12	6

Complete the pie chart for the information in the table.

Bus

(Total for Question 32 is 4 marks)

33 Change 7700 millilitres to litres.

.... litres

(Total for Question 33 is 1 mark)

---

34 $p^3 \times p^x = p^9$

Find the value of x.

$x = $ ....

(Total for Question 34 is 1 mark)

---

35 Write down all the prime numbers between 20 and 30.

....

(Total for Question 35 is 2 marks)

---

36 The table shows a cricket club's income in 2016 from a fete, a quiz and membership fees.

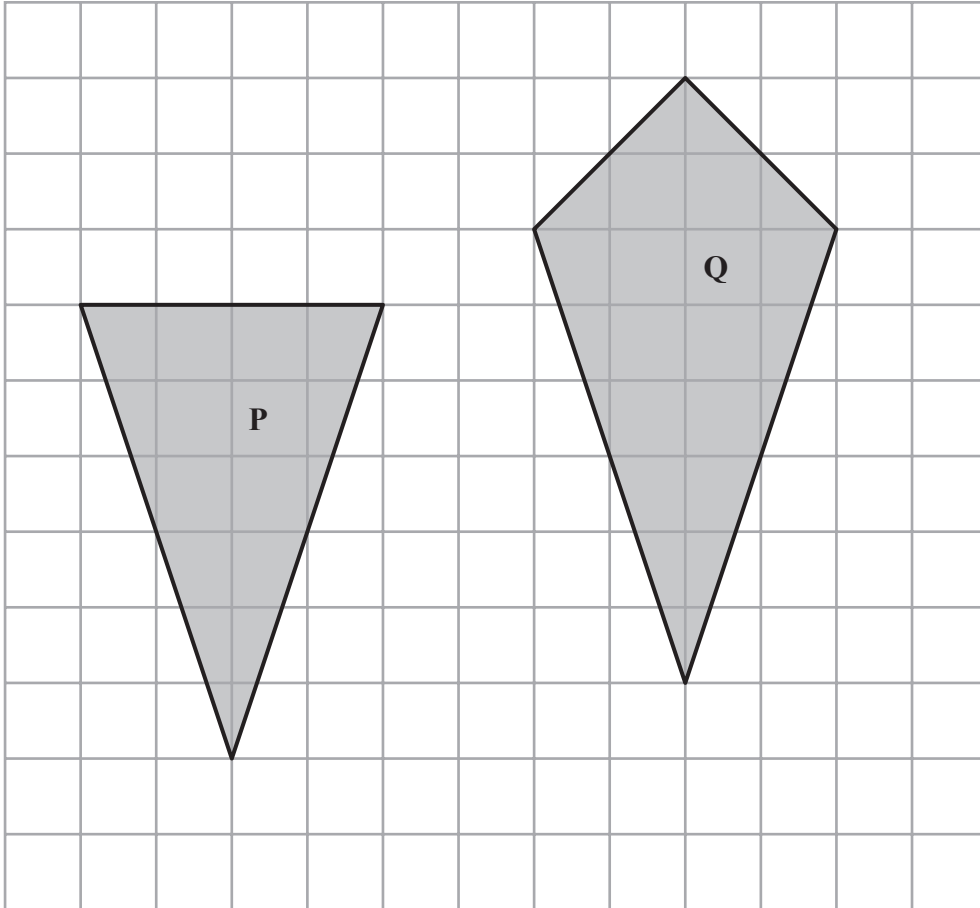|	Income	
Fete		£250
Quiz	Entry fees	13 at £5 each
	Refreshments	£35
Membership fees		25 at £20 each

Express as a ratio

the income from the fete to the income from the quiz to the income from membership fees.

Give your ratio in its simplest form.

....

(Total for Question 36 is 3 marks)

37 The diagram shows two shapes drawn on a centimetre grid.

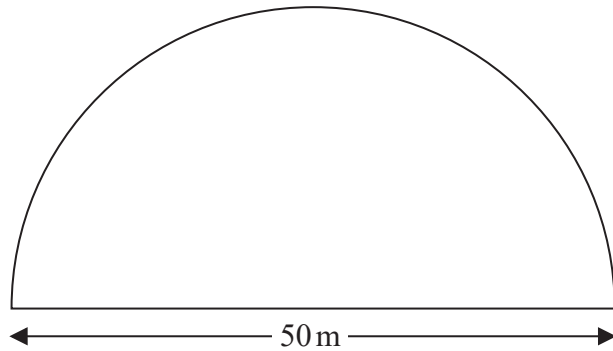(a) Write down the mathematical name of quadrilateral **Q**.

....

(1)

(b) Find the area of shape **P**.

....

(2)

(Total for Question 37 is 3 marks)

38 A farmer has a field in the shape of a semicircle of diameter 50 m.

~~— 50 m —~~

$\longleftarrow$ 50 m $\longrightarrow$

The farmer asks Jim to build a fence around the edge of the field.
Jim tells him how much it will cost.

> Total cost = £29.86 per metre of fence plus £180 for each day's work

Jim takes three days to build the fence.

Work out the total cost.

£..

(Total for Question 38 is 5 marks)

TOTAL FOR PAPER IS 80 MARKS