## Write your name here



## Mathematics

Level 1

| 9 - $\mathbf{1 3}$ January 2017 | Paper Reference |
| :--- | :--- |
| Time: $\mathbf{1}$ hour $\mathbf{3 0}$ minutes | FSM01/01 |

## You must have:

Total Marks
Pen, calculator, HB pencil, eraser, ruler graduated in cm and mm , protractor, compasses.

My signature confirms that I will not discuss the content of the test with anyone until the end of the 5 day test window.

Signature: $\qquad$

## Instructions

- Use a black ball-point pen.
- Fill in the boxes at the top of this page with your name, centre number and candidate number.
- Sign the declaration.
- Answer all questions.
- Answer the questions in the spaces provided - there may be more space than you need.
- Calculators may be used.


## Information

- The total mark for this paper is 48 .
- The marks for each question are shown in brackets - use this as a guide as to how much time to spend on each question.
- You must show clearly how you get your answers because marks will be awarded for your working out.
- Check your working and your answers at each stage.
- This sign shows where marks will be awarded for showing your check.


## Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.



## SECTION A: Birdwatching

## Answer all questions in this section.

Write your answers in the spaces provided.
1 Liz wants to feed the birds in her garden.
She wants to buy 2 bird feeders and 3 bags of bird seed.
Each bird feeder costs $£ 6.95$
A bag of bird seed costs $£ 3.10$
(a) Work out the total cost for Liz.

Use the box below to show clearly how you get your answer.
$\square$

Liz and her family want to join a bird club for a year.

| Bird Club Membership |  |  |
| :--- | :--- | :---: |
| Adult | $£ 4$ per month |  |
| Child | $£ 3$ per month |  |

Bird Club Family Membership
1 or 2 adults + up to 3 children £126 per year

Liz and her husband are adults.
Andy is their only child.
They want to choose the cheapest membership deal for their family.
(b) Which membership deal should they choose?

Show a check of your working.

Use the box below to show clearly how you get your answer.
$\square$
Write your check in the box below.

(Total for Question 1 is $\mathbf{7}$ marks)

2 Matt is building a bird box from wood.
The side of the bird box is shown below.


The length of the base is 120 mm .
The height of the front is 150 mm .
The height of the back is 200 mm .
(a) Make an accurate drawing of the side of the bird box for Matt.

Use the space opposite for your drawing.
The base has been drawn for you.
(b) Measure the length of the roof.

Give the units with your answer.

Write your answer in the box below.
$\square$
base

3 Liz is going to spend the day birdwatching at a park.
She has this plan of the paths in the park.
The plan shows the time it takes to walk along each path.


Liz arrives at the entrance to the park at 9 am.
She will walk in the park without going back along a path she has already used.
She will spend 1 hour at each of the viewing points.
Liz thinks she will be back at the entrance by 2 pm .

Is Liz correct?
Show why you think this.
(5)

Use the box below to show clearly how you get your answer.
$\square$

## SECTION B: Lowton United Football Club <br> Answer all questions in this section. <br> Write your answers in the spaces provided.

4 Lowton United is a football club.
The diagram shows some information about the matches Lowton United played in the league competition from August to December.


A team gets

- 3 points for each match won
- 1 point for each match drawn
- 0 points for each match lost.
(a) How many points in total did Lowton United get from the beginning of August to the end of December?

Use the box below to show clearly how you get your answer.
$\square$

Lowton United is taking part in a cup competition.
There are 8 teams including Lowton United in the competition.
To decide who will play who in the next round, the team names are chosen at random from a bag.

Only one team is chosen at a time.
(b) What is the likelihood that Lowton United is chosen from the bag first?

Tick $\boldsymbol{\imath}$ a box to show your answer.
impossible

unlikely

even chance

likely

certain $\square$

5 Paulo manages the ticket sales for Lowton United.
He is writing a report about ticket sales.
He wants to draw a graph to show the ticket sales for the last 6 matches.

| Ticket sales |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| match 1 | match 2 | match 3 | match 4 | match 5 | match 6 |
| 6200 | 5600 | 6400 | 6800 | 7200 | 8300 |

Paulo starts to draw a graph to show this information.
(a) Complete the graph for Paulo.

Use the graph paper and the scale on the opposite page.
Paulo wants to write a comment in the report about the ticket sales.
(b) Write a comment for the report.

Write your comment in the box below.



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(Total for Question 5 is 4 marks)

6 The total ticket sales for each of the last 6 matches are shown in the table below.

| Ticket sales |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| match 1 | match 2 | match 3 | match 4 | match 5 | match 6 |  |
| 6200 | 5600 | 6400 | 6800 | 7200 | 8300 |  |

Paulo thinks the average ticket sales for these matches is over 6500
(a) Is Paulo correct?

Show a check of your working.

The table below shows the prices and the ticket sales for the last match.

|  | Price | Ticket sales |
| :--- | :---: | :---: |
| Adult | $£ 22$ | 4600 |
| Juniors (under 16) | $£ 8$ | 3700 |

The football club wants the income from ticket sales for the last match and the next match to be the same.

For the next match the club is going to

- give free tickets to juniors
- charge $£ 25$ for each adult ticket.
(b) How many adult tickets does the club need to sell to keep the income from ticket sales the same?

Use the box below to show clearly how you get your answer.

## SECTION C: Lawn care

## Answer all questions in this section.

Write your answers in the spaces provided.
7 Jane needs to mix petrol and oil for her lawn mower.
She finds these instructions for mixing the petrol and oil.


Jane uses 100 ml of oil.
(a) How much petrol should Jane use?

Show a check of your working.
Use the box below to show clearly how you get your answer.
$\square$
Use the box below to show your check.
$\square$

Jane has a lawn in front of her house.
The lawn is in the shape of a rectangle 6 m by 4 m .


Jane buys one box of lawn feed.
One box is enough for $100 \mathrm{~m}^{2}$ of lawn.
Jane says
My lawn needs $\frac{1}{4}$ of this box.
(b) Will $\frac{1}{4}$ of this box be enough for the lawn?

Use the box below to show clearly how you get your answer.

8 Jane wants to put edging around her lawn.


The edging is sold in 50 cm strips.
The edging strips cost $£ 3$ each.
Jane wants to know how much it will cost to put edging strips around the lawn.
Find the total cost of the edging strips for Jane.

Use the box below to show clearly how you get your answer.

9 Jane wants to buy a barbecue.
She sees this offer.

Barbecue $£ 150$
Pay 20\% deposit.
(a) Work out $20 \%$ of $£ 150$ for Jane.

Use the box below to show clearly how you get your answer.


Jane also wants to buy some garden furniture.
The garden furniture costs $£ 800$
She can pay for the garden furniture in 6 equal monthly payments.
Jane thinks she will need to pay $£ 140$ each month.
(b) Is Jane correct?

Show why you think this.

Use the box below to show clearly how you get your answer.
$\square$
(Total for Question 9 is $\mathbf{4}$ marks)
TOTAL FOR PAPER IS 48 MARKS


