Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
3	
4	
TOTAL	

AQA

Functional Skills Certificate
January 2014

Functional Mathematics 4367

Level 1

Monday 20 January 2014 9.00 am to 10.30 am

For this paper you must have:
- mathematical instruments
- a copy of the data sheet (examination) (enclosed).

You may use a calculator.

Time allowed
- 1 hour 30 minutes

Instructions
- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work that you do not want to be marked.
- State the units of your answer where appropriate.

Information
- The marks for questions are shown in brackets.
- The maximum mark for this paper is 60.
- You may ask for more answer paper, graph paper and tracing paper. These must be tagged securely to this answer booklet.
- You are expected to use a calculator where appropriate.
- Evidence of checking is specifically assessed in Questions 2(c) and 3(b). These questions are indicated with a †.

Advice
- In all calculations, show clearly how you work out your answer.

There are no questions printed on this page

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ANSWER IN THE SPACES PROVIDED

Do not write outside the box

Answer **all** questions in the spaces provided.

1 **Funfair**

There is a **data sheet** for Funfair.

Helen, George, Tim, Jane and Sally go to the funfair.

1 (a) Helen is one metre tall.

Tick the rides she is tall enough to go on.

Helter Skelter	☐
Waltzer	☐
Crazy Spinner	☐
Bumper Cars	☐
Splash Boats	☐

(2 marks)

Do not write outside the box

1 (b) George is 4 feet tall.

He uses this information to work out how tall he is in centimetres.

1 foot = 30 centimetres

I am tall enough to go on every ride.

George

Is he correct?
You **must** show your working.

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(3 marks)

Do not write outside the box

1 (c) George and Tim **each** have £9 to spend on tokens.
They put their money together.

What is the largest number of tokens they can buy?

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(3 marks)

1 (d) Jane and Sally are tall enough to go on all the rides.
They have 26 tokens altogether.

- They want to share a Splash Boat and share a Bumper Car.
- Jane wants to go on every ride **except** the Waltzer.
- They want to use as many of their tokens as possible.

Write down a possible list of rides for Jane and for Sally.
Work out the total number of tokens they use.

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(6 marks)

14

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2 **Canal Boat Holiday**

There is a **data sheet** for Canal Boat Holiday.

I want to go on a canal boat holiday on either
the Cheshire route
or
the Stourport route.

Amy

Amy finds this information.

> The distance travelled along a canal can be measured in **lock-miles**.
>
> Number of lock-miles = length in miles + number of locks

2 (a) Which has more lock-miles, the Cheshire route or the Stourport route?
You **must** show your working.

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(5 marks)

2 (b) Canal boats can travel 3 lock-miles per hour.

Show that it can take **less than** 70 hours to travel the Cheshire route.

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(1 mark)

Do not write outside the box

Amy chooses to go on the Cheshire route.
She hires a canal boat for a **7-day** holiday.

†2 (c) Amy wants to complete the Cheshire route.

She says,

"If I travel for an average of **9 hours** a day I can complete the Cheshire route."

Is she correct?
You **must** show your working.

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(3 marks)

Check your calculation.
Show how you have done your check.

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(1 mark)

2 (d) On one day of Amy's holiday

- sunrise is at 6 am
- she travels at 3 lock-miles per hour
- she stops for 4 hours at lunch time
- sunset is at 8 pm.

Work out the largest number of lock-miles she can travel.

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(5 marks)

15

Do not write outside the box

3 **Stickers**

There is a **data sheet** for Stickers.

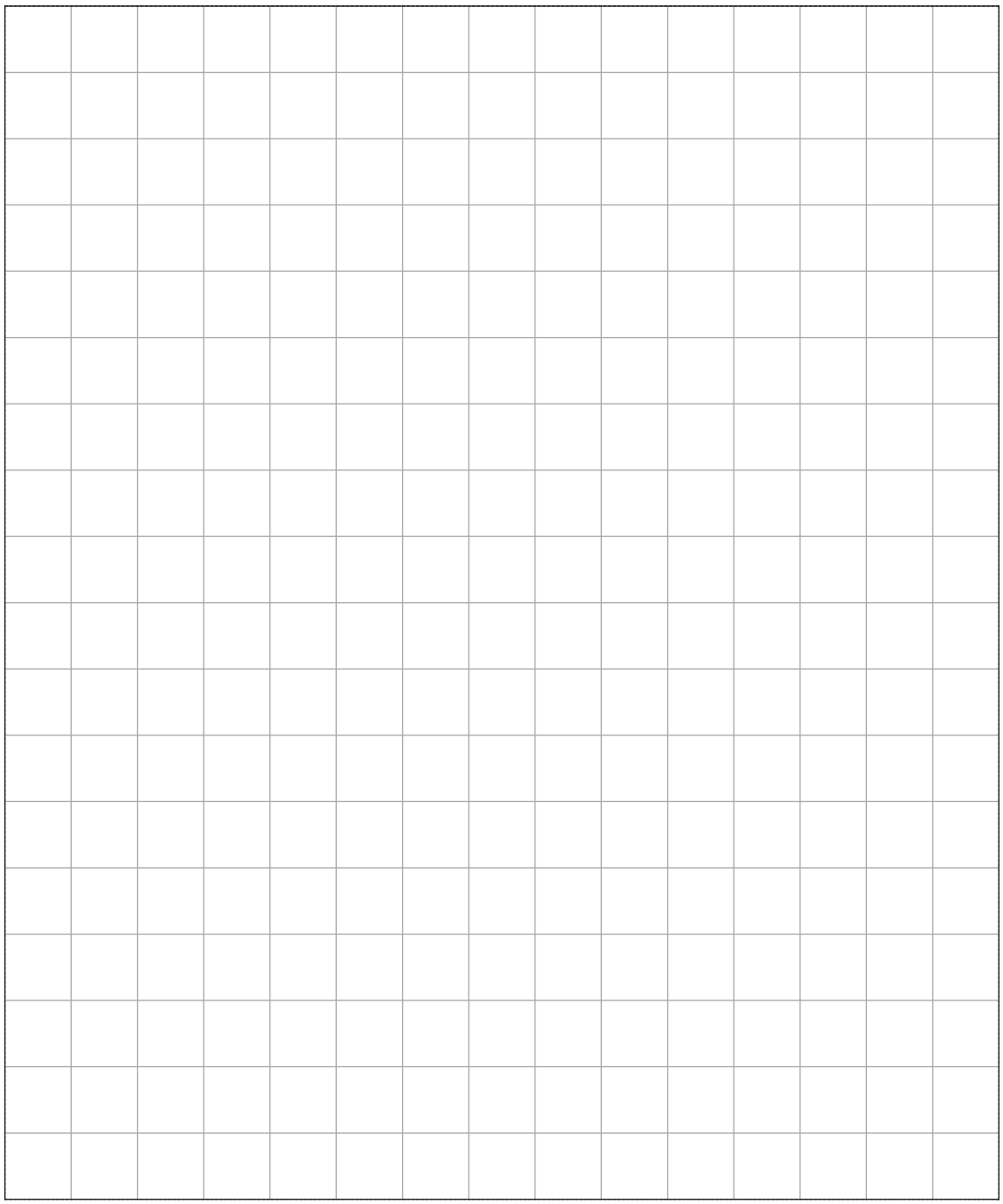
3 (a) Zoe is designing a page for 4 **landscape** stickers and 2 **portrait** stickers.
The design for the page must have

- at least 1 cm between stickers
- at least one line of symmetry.

Show **one** possible design for the page.

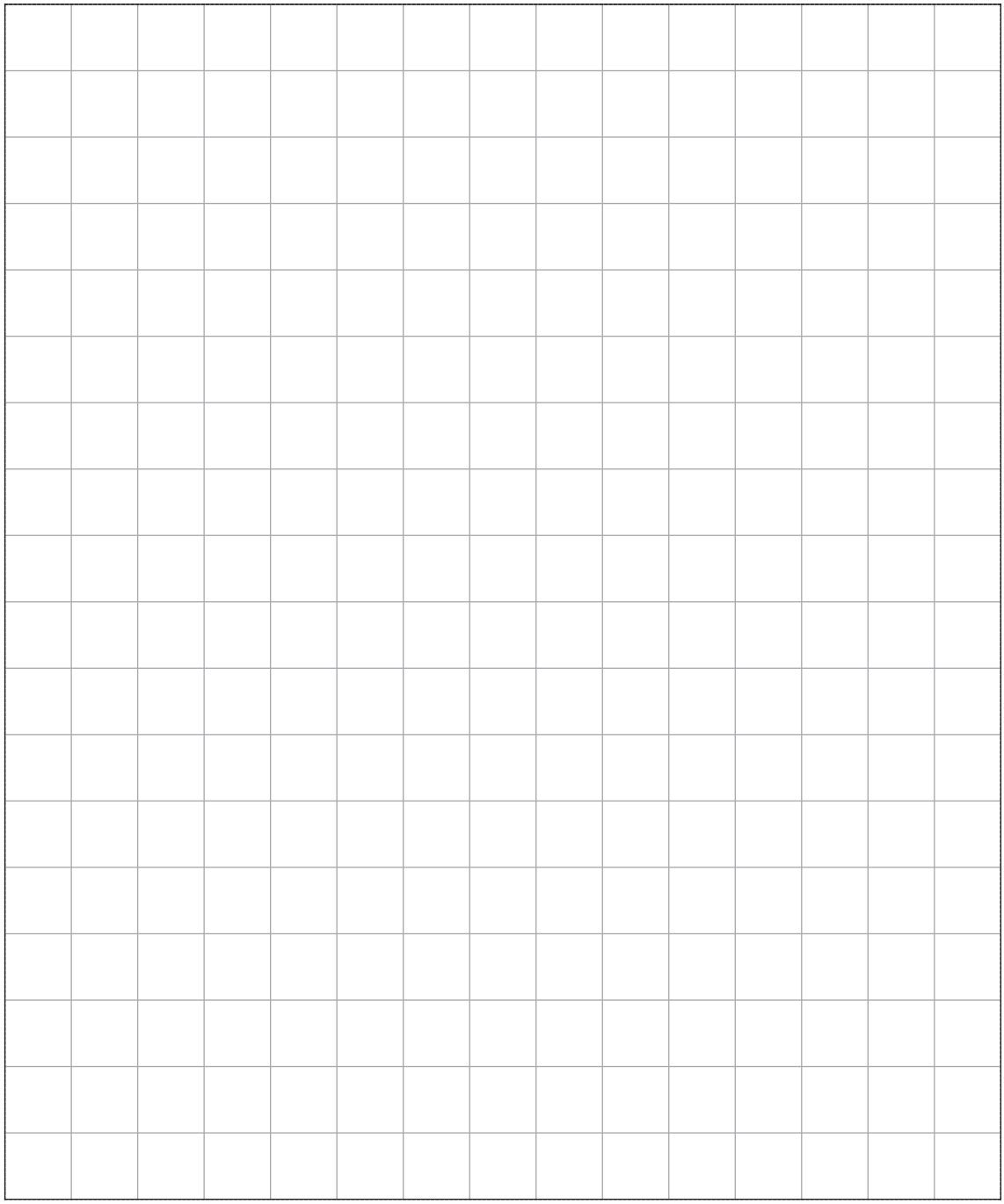
(4 marks)

You can practise on this page.



Do not write outside the box

Put your final design on this page.



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✝3 (b) A sticker book has 42 pages.
There are spaces for 6 stickers on each page.

How many spaces for stickers are in the book?
You **must** show your working.

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(2 marks)

Check your calculation.
Show how you have done your check.

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(1 mark)

Mrs Smith

3 (c) There are 50 packs of stickers in each box.
Mrs Smith sells each pack for 60 p.

Work out the total amount she gets for selling **all** the packs in **one** box.

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(2 marks)

3 (d) Mrs Smith buys each box for £22.

How much profit does she make on **one** box?

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(2 marks)

Do not write outside the box

3 (e) Mrs Smith is working out the number of packs to buy each week.

She records the number of packs she sells in the first 5 weeks.

Week 1	276
Week 2	225
Week 3	230
Week 4	249
Week 5	270

She says,

"On average, I sold 250 packs a week."

Is she correct?
You **must** show your working.

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(4 marks)

15

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4 **Market Stall**

Joe runs a market stall.
He bought some items for the stall.

I bought
70 books at 50 p each
and
25 bags at £2.65 each.

Joe

4 (a) In total, how much did it cost Joe to buy these items?

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(4 marks)

Do not write outside the box

4 (b) Joe makes these price labels.

Books **£1.10 each**	**Bags** **£4.00 each**

Joe sells **all** the books and **18** of the bags at the prices on the labels.
He then sells the rest of the bags at **half** price.

Does he make more than £60 profit?
You **must** show your working.

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(7 marks)

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4 (c) These items are on sale at another market stall.

Hats £4.25 each	Bangles £2.70 each	Rings £2.30 each	Purses £3.75 each

Sarah wants to buy **exactly six** of these items to use as prizes at a party.

She decides to

- buy **at least one** of each item
- spend between £18 and £20.

What items could she buy?
Give **one** possible choice.
Show how much she spends in total.

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(5 marks)

END OF QUESTIONS

16

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