Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
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6	
7	
TOTAL	

AQA

Free-Standing Mathematics Qualification
Higher Level
June 2014

Financial Calculations 4984

Unit 4

Thursday 22 May 2014 9.00 am to 10.15 am

For this paper you must have:
- a clean copy of the Data Sheet (enclosed)
- a calculator
- a protractor
- a ruler.

Time allowed
- 1 hour 15 minutes

Instructions
- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- 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.
- Do all rough work in this book. Cross through any work that you do not want to be marked.
- You may **not** refer to the copy of the Data Sheet that was available prior to this examination. A clean copy is enclosed for your use.

Information
- The marks for questions are shown in brackets.
- The maximum mark for this paper is 50.
- You are expected to use a calculator where appropriate.

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

Section A

Answer **all** questions.

Answer each question in the space provided for that question.

Use **Shoes 4 U** *on page 2 of the Data Sheet.*

1 (a) Olivia works in the shop.
She buys a pair of shoes which are on sale at £52.
She is given the staff discount of 16%.
How much does Olivia pay?

[3 marks]

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Answer.....

1 (b) At the beginning of a week, 'Shoes 4 U' had 180 pairs of shoes in stock.
During the week, the shop sold 140 of these pairs of shoes.

Express the number of pairs of shoes **not** sold in the week as a fraction of the number of pairs of shoes in stock at the beginning of the week.

Give your answer in its simplest form.

[2 marks]

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Answer.....

1 (c) Maha buys two bags.
Each bag costs £9, correct to the nearest pound.

What is the maximum possible price that Maha pays for the two bags?

[2 marks]

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Answer.....

1 (d) Jeremy goes to 'Shoes 4 U' to buy a pair of men's shoes.

The shop offers a reduction of $\frac{1}{3}$ of the normal price. However, Jeremy needs size 14 shoes. This large size has a 25% surcharge added to the sale price of the shoes.

What percentage reduction in the original price is Jeremy given?

[4 marks]

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Answer.....

11

Turn over for the next question

Section B

Answer **all** questions.

Answer each question in the space provided for that question.

Use **Bank accounts** *on page 2 of the Data Sheet.*

2 Jose deposits £4260 in the Nine Carat Account for 24 months.
It earns compound interest at the rate of 1.59% paid every 6 months.

	Starting value (£)	Interest (£)	Final value (£)
First 6 months	4260.00	67.73	4327.73
Second 6 months	4327.73	68.81	4396.54
Third 6 months	4396.54		
Fourth 6 months			

2 (a) Complete the table above.

[4 marks]

Space for working

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2 (b) Find the total interest which Jose has received in the 24 months.

[1 mark]

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Answer.....

5

Section C

Answer **all** questions.

Answer each question in the space provided for that question.

Use **Price comparison** *on page 3 of the Data Sheet.*

3

	A	B	C	D
1	**Item**	**Price in London**	**Price in Boston**	**Price in Boston as a percentage of price in London**
2	Apple iPod Nano	£115.00	£87.74	
3	Elizabeth Arden '8 hour cream'	£25.00	£11.56	
4	Women's 'Roxanne' skinny jeans	£160.00	£101.79	
5	Sesame Street Let's Rock Elmo	£85.00	£40.13	

The prices were correct in November 2011.

3 (a) Complete the spreadsheet above to give the price in Boston as a percentage of the price in London.

Give the percentages to one decimal place.

[4 marks]

Space for working

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3 (b) State a formula which would give the content of cell **D3**.

[1 mark]

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Answer.....

5

4 (a) Kate flew to Boston.
She paid £65 for UK air passenger duty. This duty was 13.4% of the cost of her return ticket to Boston.

How much did Kate pay for her return ticket to Boston?

[3 marks]

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Answer.....

4 (b) In Boston, Kate paid $192 for each night she stayed in a hotel.
The exchange rate was $1.61 to £1.

Calculate the cost, in pounds, of each night in the hotel.

[3 marks]

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Answer.....

4 (c) Kate had dinner with her friend Harry. The total cost of the dinner was $84.
They agreed to divide the cost of their dinner in the ratio of 4:3, with Kate paying more.

How much, in dollars, did Kate pay?

[3 marks]

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Answer.....

4 (d) There were 212 passengers on a plane.
The total weight of their luggage was 3941 kg.

Using approximations, estimate the average weight of each passenger's luggage.

You must show your approximations and all your working.

[3 marks]

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Answer.....

12

Turn over for the next question

Section D

Answer **all** questions.

Answer each question in the space provided for that question.

Use **Firm Foundation Credit Services** *on page 3 of the Data Sheet.*

5 Lynn needs some money to start a small business. She decides to borrow £3250 and to repay the loan over 36 months.

5 (a) Write down the monthly repayment which Lynn will make.

[1 mark]

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Answer.....

5 (b) By finding the total repayments which Lynn will make to repay the loan, calculate the total interest which she will be charged for borrowing this money.

[3 marks]

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Answer.....

5 (c) Express the total interest which Lynn will be charged for borrowing this money as a percentage of the amount borrowed.

[2 marks]

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Answer.....

6

Section E

Answer **all** questions.

Answer each question in the space provided for that question.

Use **Taxation 2013–2014** *on page 4 of the Data Sheet.*

6 Sarah earned £3782 per month and had a tax-free allowance of £9205.

Calculate:

6 (a) Sarah's taxable income;

[3 marks]

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Answer.....

6 (b) the amount of income tax which Sarah paid in the year.

[5 marks]

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Answer.....

8

Turn over for the next question

Section F

Answer **all** questions.

Answer each question in the space provided for that question.

7 The annual rate, R, expressed as a decimal, at which a principal, £P, would increase to an amount, £A, in n years is given by the following formula.

$$R = \sqrt[n]{\frac{A}{P}} - 1$$

An investment of £2800 has grown to £3412 in five years.

Find the annual rate of interest on this investment, expressed as a percentage.

[3 marks]

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Answer.....

3

END OF QUESTIONS

There are no questions printed on this page

DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED

There are no questions printed on this page

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Section C: 'Fly to the U.S. and save hundreds on Christmas list of leading brands' by Sean Poulter, *Daily Mail*, 17 November 2011.