Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
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7	
8	
TOTAL	

AQA

Free-Standing Mathematics Qualification
Higher Level
June 2012

Financial Calculations 4984

Unit 4

Thursday 24 May 2012 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 in the spaces provided.

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

1 Matt deposits £2500 in the Standard account for 12 months.
It earns compound interest at the rate of 0.58% paid every 3 months.

1 (a) Complete the table below.

	Starting value (£)	Interest (£)	Final value (£)
First 3 months	2500.00	14.50	2514.50
Second 3 months	2514.50	14.58	2529.08
Third 3 months	2529.08		
Fourth 3 months			

(4 marks)

Space for working

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1 (b) Write down the total interest which Matt has received in the year.

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Answer...

(1 mark)

1 (c) Hence calculate the AER on this investment.

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Answer...

(2 marks)

7

Turn over for the next question

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ANSWER IN THE SPACES PROVIDED

Section B

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

Use **High street chemist** *on page 2 of the Data Sheet.*

2 (a) Carol bought mascara.
The usual price of the mascara was £ 8.99 .
How much did Carol pay?

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Answer..

(3 marks)

2 (b) Rachel bought three lipsticks which normally cost £ 5.49 each.
In the sale, with the 'Buy two get one free' offer, Rachel paid £ 10.98 for the three lipsticks.
How much did Rachel pay for each lipstick?

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Answer..

(2 marks)

5

Do not write outside the box

3 (a) Susie and Louise spend £28 on a Sparkling Beauty Collection pack.
They decide to divide the cost in the ratio of 4 : 3, with Susie paying more.

How much does Susie pay?

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Answer ....

(3 marks)

3 (b) Many articles are cheaper in airport duty-free shops.
In Lisbon airport, a bottle of perfume costs € 84.
The exchange rate is € 1.21 to £ 1.

Calculate the cost of the bottle of perfume in pounds.

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Answer ....

(3 marks)

6

Turn over for the next question

Section C

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

Use **Car parking** *on page 3 of the Data Sheet.*

4 (a) Complete the spreadsheet to give the most expensive cost as a percentage of the cheapest cost.

Give the percentages to the nearest integer.

	A	B	C	D
1	**Airport**	**Cheapest cost for parking (£)**	**Most expensive cost for parking (£)**	**Most expensive cost as a percentage of cheapest cost**
2	Birmingham	44.64	71.50	
3	Gatwick	38.90	51.20	
4	Heathrow	63.80	157.00	
5	Manchester	29.99	79.99	
6	Stansted	36.70	47.30	

(5 marks)

Space for working

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4 (b) State a formula which would give the content of cell D6.

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Answer...

(1 mark)

4 (c) Javian books and pre-pays £99.22 for four weeks' car parking at Heathrow. This charge is only 22.55 % of the amount which he would have been charged if he had not prepaid.

Calculate the charge which Javian would have paid if he had not prepaid.

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Answer ....

(3 marks)

4 (d) Colin says that he pays about £32 per week for his airport parking.

This amount is correct to the nearest pound.

What is the minimum possible cost to Colin for three weeks' parking?

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Answer ....

(2 marks)

11

Turn over for the next question

Section D

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

Use **Solid Oak Credit Services** *on page 3 of the Data Sheet.*

5 Daniel wants to buy an iPad. He decides to borrow £750 and to repay the loan over 24 months.

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

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Answer..

(1 mark)

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

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Answer..

(3 marks)

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

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Answer..

(2 marks)

6

Turn over for the next question

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Section E

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

Use **Taxation 2011–2012** *on page 4 of the Data Sheet.*

6 Max earned £4108 per month and had a tax-free allowance of £7475.

Calculate:

6 (a) Max's taxable income;

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Answer..

(3 marks)

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

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Answer..

(5 marks)

8

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Section F

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

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 formula

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

An investment of £3500 has grown to £4506 in four years.
Find the annual rate of interest on this investment, expressed as a percentage.

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Answer ....

(3 marks)

3

8 A shopkeeper reduces all his original prices by 70% for a sale.
At the end of the sale, the shopkeeper has a final clearance day when all the sale prices are reduced by a further 20% of the sale price.
Emma buys an article at the final clearance day price.
What percentage of the original price does she pay?

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Answer ....

(4 marks)

4

END OF QUESTIONS

There are no questions printed on this page

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Section C: 'Warning on airport parking price gap' by Lucy Townsend, *Express and Star*, 14 May 2010.