Surname		Other Names	
Centre Number		Candidate Number	
Candidate Signature			

Free-Standing Mathematics Qualification
January 2008
Intermediate Level

CALCULATING FINANCES   6984/2
Unit 4

AQA
ASSESSMENT and
QUALIFICATIONS
ALLIANCE

Wednesday 30 January 2008   9.00 am to 10.15 am

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

Time allowed: 1 hour 15 minutes

Instructions
- Use blue or black ink or ball-point pen. Pencil should only be used for drawing.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- Answer the questions in the spaces provided.
- Do all rough work in this book. Cross through any work 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 maximum mark for this paper is 50.
- The marks for questions are shown in brackets.
- You are expected to use a calculator where appropriate.

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

6984/2

SECTION A

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

*Use **Personal credit** on page 2 of the Data Sheet.*

1 Joanna needs to borrow £6000 to refurbish her house and she wishes to repay the loan over 60 months.

Joanna considers using either Landmark Loans or Fidelity Finance.

(a) (i) Find the monthly repayments which Joanna would make for her chosen loan from Landmark Loans.

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Answer...

(1 mark)

(ii) By finding the total repayments which Joanna makes to repay the loan, calculate the total interest which she is charged for borrowing this money.

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Answer...

(3 marks)

(b) Joanna notices that if she took out the loan from Fidelity Finance, she would have a three-month 'payment holiday', whereby she would not have to pay back any money on the loan for the first three months.
Joanna considers borrowing the £6000 from Fidelity Finance and repaying the loan over 60 monthly payments.

Calculate the total interest which Joanna would pay on the loan from Fidelity Finance.

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Answer...

(3 marks)

LEAVE MARGIN BLANK

(c) The two companies claim that they are charging the same APR.

   (i) Why does Fidelity Finance charge more per month in repayment than Landmark Loans?

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(1 mark)

   (ii) Calculate the total extra interest charged by Fidelity Finance.

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(2 marks)

10

Turn over for the next question

Turn over ▶

SECTION B

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

Use **Prices in 1973 and 2006** *on page 3 of the Data Sheet.*

2 The spreadsheet below gives the data for six items.

	A	B	C	D	E
1	**Item**	**Price in 1973**	**Price in 2006**	**Increase in price**	**Increase as a percentage of the price in 1973**
2	Butter (500 grams)	15p	85p		
3	Cheddar cheese (1 kg)	14p	£2.99		
4	Milk (1 pint)	6p	35p		
5	Potatoes (2 kg)	4p	44p		
6	House (average price in the UK)	£9 941	£157 250		
7	Rent (average monthly rent)	£25	£500		

(a) Complete the spreadsheet.
Give the percentages to the nearest whole number.

Space for working

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(5 marks)

(b) State the formula which gives the value in cell E3.

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Answer...

(2 marks)

(c) In 1973, the average annual salary was £1872.
In 2006, the average annual salary was £22 411.

Calculate the percentage increase in the annual salary.

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Answer...

(2 marks)

(d) Hence write down the items of those listed which have become more affordable in the 33-year period given.

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(2 marks)

| 11 |

3 Barry and Helen buy a 25 kg sack of potatoes. They divide the potatoes between them in the ratio of 3:2.

How many kilograms of potatoes does Barry get?

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Answer...

(3 marks)

| 3 |

Turn over ▶

SECTION C

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

Use **Overdrafts** *on page 3 of the Data Sheet.*

4   Sharon received a monthly credit card bill for £308.72. She had no money in her bank account. Rather than pay the credit card bill late, she decided to write a cheque and become overdrawn at her bank.

She banks at Lloyds TSB, who paid the cheque but charged her a penalty for having insufficient funds in her account. In addition, she was charged one month's interest at the monthly rate of 1.400% on £308.72.

(a)   Calculate the interest which Sharon was charged.

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Answer..

(2 marks)

(b)   Calculate the total cost to Sharon of paying the credit card bill.

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Answer..

(2 marks)

4

SECTION D

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

Use **Taxation 2007 – 2008** *on page 4 of the Data Sheet.*

5 In one year, Pierre earned £4121 per month and had a tax free allowance of £5225.

(a) Calculate Pierre's annual taxable income.

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Answer..

(3 marks)

(b) Calculate the amount of income tax which Pierre paid in that year.

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Answer..

(5 marks)

8

Turn over ▶

6 The cost of a computer is £649 plus VAT at the standard rate.

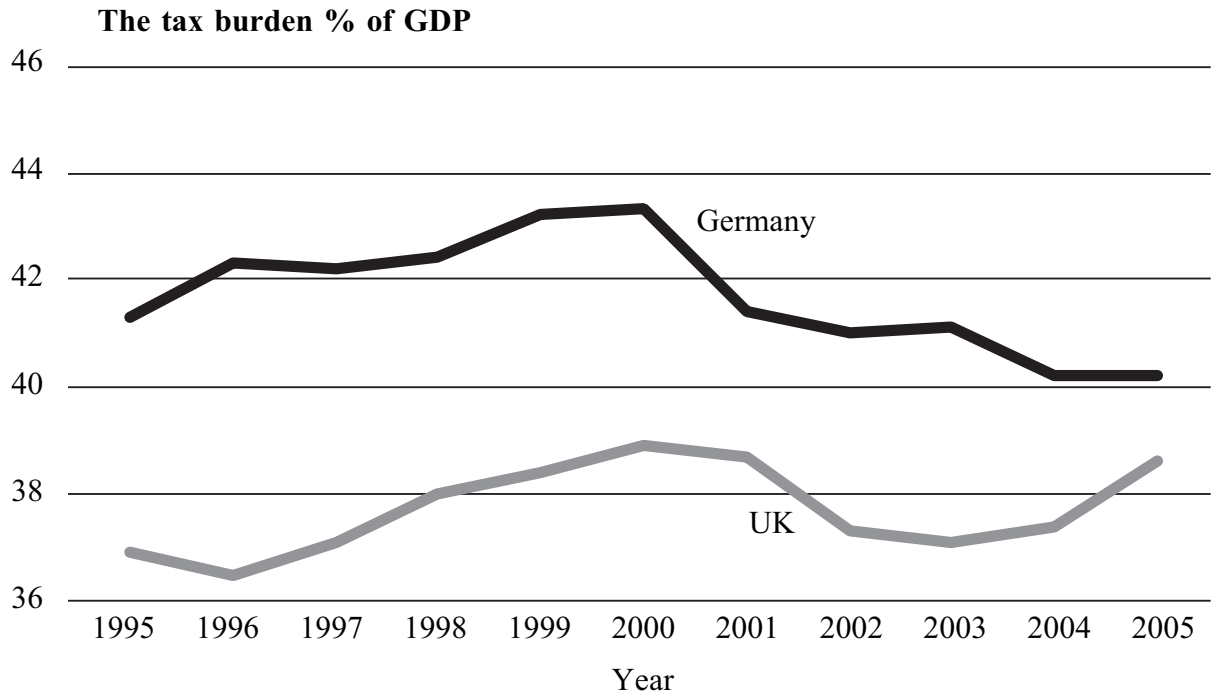Calculate the total price of the computer.

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Answer..

(2 marks)

2

SECTION E

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

7   The graph below shows the tax burden for both Germany and the UK in the period 1995 – 2005.

The tax burden % of GDP

Note: The tax burden is given as a percentage of that country's productivity.

In Germany, in which annual period was the tax burden the greatest?

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Answer..

(2 marks)

2

Turn over ▶

8 In 2004, the sales of chewing gum in one town in the UK were £340 thousand. This was an increase of 27.7% on the sales in 2003.

What were the sales of chewing gum in 2003?

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Answer...
(3 marks)

<div style="text-align:right">

3

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9 The annual rate of interest, *R*, expressed as a decimal, at which a principal, £*P*, would increase to an amount, £*A*, after *n* years is given by the formula

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

An investment of £2100 has grown to £2681 after four years.

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

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Answer...
(3 marks)

<div style="text-align:right">

3

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10 A shopkeeper reduces all his prices by 30%.
At the end of the sale, the shopkeeper has a 'green cross' sale in which all the prices are reduced by a further 20% of the sale price.

Ken buys an article at the further reduced sale price.

What percentage of the original price does he pay?

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Answer..

(4 marks)

4

END OF QUESTIONS

There are no questions printed on this page