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Other Names										
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Free-Standing Mathematics Qualification  
Higher Level

# Financial Calculations

# 4984

## Specimen Question Paper

**For this paper you must have:**

- a clean copy of the Data Sheet (enclosed)
- a protractor
- a ruler
- a calculator.

### 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.

For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
TOTAL	

**Section A**

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

Use **Electronic sale** from page 2 of the Data Sheet.

**1 (a)** An LCD TV costs £ 799 before the sale.  
Jane bought this television in the sale.  
  
How much did Jane pay for the television?

.....  
.....

(3 marks)

**1 (b)** Kylie bought a DVD recorder in the sale.  
The usual price of the DVD recorder was £ 168.99  
  
How much was Kylie charged?

.....  
.....  
.....  
.....

(3 marks)

**2** Daniel and Lily agree to spend £ 720 on a new television.  
They decide to divide the cost in the ratio of 2 : 3, with Lily paying more.  
  
How much does Lily pay?

.....  
.....  
.....

(3 marks)

      
**6**

      
**3**

**3**

The cost of a DVD recorder in the USA is \$ 124.  
The exchange rate is \$ 1.99 to £ 1.

Find this cost in pounds.

.....

.....

.....

*(3 marks)*

      
**3**

**Section B**

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

Use **Bank accounts** from page 3 of the Data Sheet.

- 4 Imran deposits £ 1200 in the Goldstar account for 18 months.  
It earns compound interest at the rate of 1.73 % paid every 6 months.

	<b>Starting value (£)</b>	<b>Interest (£)</b>	<b>Final value (£)</b>
First 6 months	1200.00	20.76	1220.76
Second 6 months	1220.76		
Third 6 months			

Complete the table above.

(4 marks)

*Space for working*

.....

.....

.....

.....

      
**4**

**Section C**

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

Use **Easter eggs** from page 3 of the Data Sheet.

- 5** A spreadsheet is used to find the total weight (chocolate and packaging) of each of the five Easter eggs, and to find the percentage of the total weight which is chocolate.

	A	B	C	D	E
1	<b>Easter egg</b>	<b>Weight of chocolate (ounces)</b>	<b>Weight of packaging (ounces)</b>	<b>Total weight of Easter egg (ounces)</b>	<b>Percentage of total weight which is chocolate</b>
2	Celebration	12	6		
3	Crunchie	20.5	8.5		
4	Galaxy	14	5.5		
5	Maltesers	13.5	6.5		
6	Toblerone	8	4		

- 5 (a)** Complete the spreadsheet to give the percentages of the total weights which are chocolate.

Give the percentages to one decimal place.

(5 marks)

*Space for working*

.....

.....

.....

.....

.....

.....

.....

- 5 (b)** State a formula which would give the content of cell E5.

.....

(1 mark)

**Section D**

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

Use **Taxation 2008-2009** from page 4 of the Data Sheet.

**6** Christopher earns £3780 per month and has a tax free allowance of £5225.

Calculate:

**6 (a)** Christopher's taxable income;

.....  
.....  
.....

*(3 marks)*

**6 (b)** the amount of Income tax which Christopher pays in the year.

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

*(5 marks)*

**Section E**

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

Use **Cost of borrowing money** from page 4 of the Data Sheet.

**7** Pamela wishes to borrow £4950 from the Co-operative Bank and to repay the loan over five years.

**7 (a)** If Pamela borrows £4950 she is charged an APR of 16.9%  
The monthly repayment for this loan is £119.63.

By finding the total repayments which Pamela makes over five years to repay the loan, calculate the total interest which she would be charged for borrowing this money.

.....  
.....  
(3 marks)

**7 (b)** If Pamela borrows £5000 she is charged an APR of 6.9%. Her monthly repayment would be £98.28 per month.

Calculate the total interest over five years which she would be charged for borrowing £5000.

.....  
.....  
(2 marks)

**7 (c)** Hence find the reduction in the interest charged which Pamela obtains by borrowing £5000 rather than £4950.

.....  
.....  
.....  
(1 mark)

**Section F**

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

**8** Kim buys two jumpers which cost £ 3 each. This price is given to the nearest pound.  
What is the maximum cost to Kim of the two jumpers?

.....  
.....

*(2 marks)*

      
**2**

**9** In 2007, the number of tickets sold for the Glastonbury Festival was 137 550.  
This was an increase of 22.8 % on the number sold in 2005.

How many tickets were sold in 2005?

.....  
.....  
.....

*(3 marks)*

      
**3**

**10** A shopkeeper normally sells a coat at a price that includes a mark up of 100 % for profit.  
When she sells the coat in a sale she still wants to make a profit of 20 %.

By what percentage does the shopkeeper reduce the price of the coat in the sale?

.....  
.....  
.....  
.....

*(4 marks)*

      
**4**



**11** Samuel invests £ $S$ . Interest is paid at the fixed rate of 0.27% per month. After  $n$  years, the amount of money which Samuel will have as a result of his investment is £ $P$ , where  $P$  is given by

$$P = S \times 1.0027^{12n}$$

**11 (a)** Samuel invests £8000 for 1 year. Use the formula to find the total amount of money which Samuel will have at the end of the year.

.....  
.....  
.....  
(3 marks)

**11 (b)** Hence find the A.E.R. (Annual Equivalent Rate) for this investment.

.....  
.....  
.....  
(2 marks)

5

**END OF QUESTIONS**

ACKNOWLEDGEMENT OF COPYRIGHT – HOLDERS AND PUBLISHERS

Section C: Easter eggs: 'More Plastic Than Egg' by E. O'Hagan and M. Khan, © *Daily Mail*, 6 April 2007  
Section E: Cost of Borrowing Money : 'What a difference a tenner makes' by P. Atherton, © *Telegraph Media Group Ltd* 2007