Centre No.						Paper Reference						Surname		Initial(s)	
Candidate No.						**5**	**5**	**4**	**2**	**H**	**/**	**9**	**A**	Signature	

Edexcel GCSE

Mathematics B (Modular) – 2544

Paper 9 – Section A (Calculator)

Higher Tier

Unit 2 Test

Monday 12 November 2007 – Morning

Time for Section A: 20 minutes

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
This section has 4 questions. The total mark for this section is 15. The total mark for this paper is 30.
There are 8 pages in this question paper. Any blank pages are indicated.
Calculators may be used for Section A only.
If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

Turn over

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SECTION A

Answer ALL FOUR questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

1. 30 adults took part in a survey.
   They were each asked how much money they spent on lottery tickets last week.
   The table shows the results of the survey.

Money (£)	Frequency	
0	5	
2	16	
4	6	
20	2	
30	1	

Work out the mean amount of money the 30 adults spent on lottery tickets.

£ ....

(Total 3 marks)

Q1

2. Liam rolls a fair 6-sided dice once.

Write down the probability that the dice will show a 2 or a 3

....

(Total 2 marks)

N 3 0 6 5 7 A 0 3 0 8

3. Michael wants to find out how much teenagers spend on magazines.

He uses this question on a questionnaire.

How much do you spend on magazines?

| £1 to £2 | £2 to £3 | £3 to £4 | over £4 |

(a) Write down **two** things that are wrong with this question.

1 ....

....

2 ....

....

(2)

(b) Design a better question Michael can use to find out how much teenagers spend on magazines.
You must include some response boxes.

(2)

The table shows some information about the students at Michael's school.

Year	Number of males	Number of females	Total
Year 10	104	76	180
Year 11	87	93	180
Year 12	60	40	100
Year 13	54	46	100
Total	305	255	560

Michael takes a sample of 100 students.
His sample is stratified by both Year and gender.

(c) Calculate an estimate for the number of female students from Year 12 in his sample.

....

(2)

(Total 6 marks)

Q3

4. Joe owns a small shop.
The table shows his sales, in £, in the eight 3 month periods for the last two years.

		3 month period	**Sales in £**
Year 1	1	January to March	3420
	2	April to June	3370
	3	July to September	3750
	4	October to December	4020
Year 2	5	January to March	3940
	6	April to June	3810
	7	July to September	4230
	8	October to December	4560

The first four 4-point moving averages have been worked out.

(a) Work out the fifth 4-point moving average.

£3640, £3770, £3880, £4000, £...................

(2)
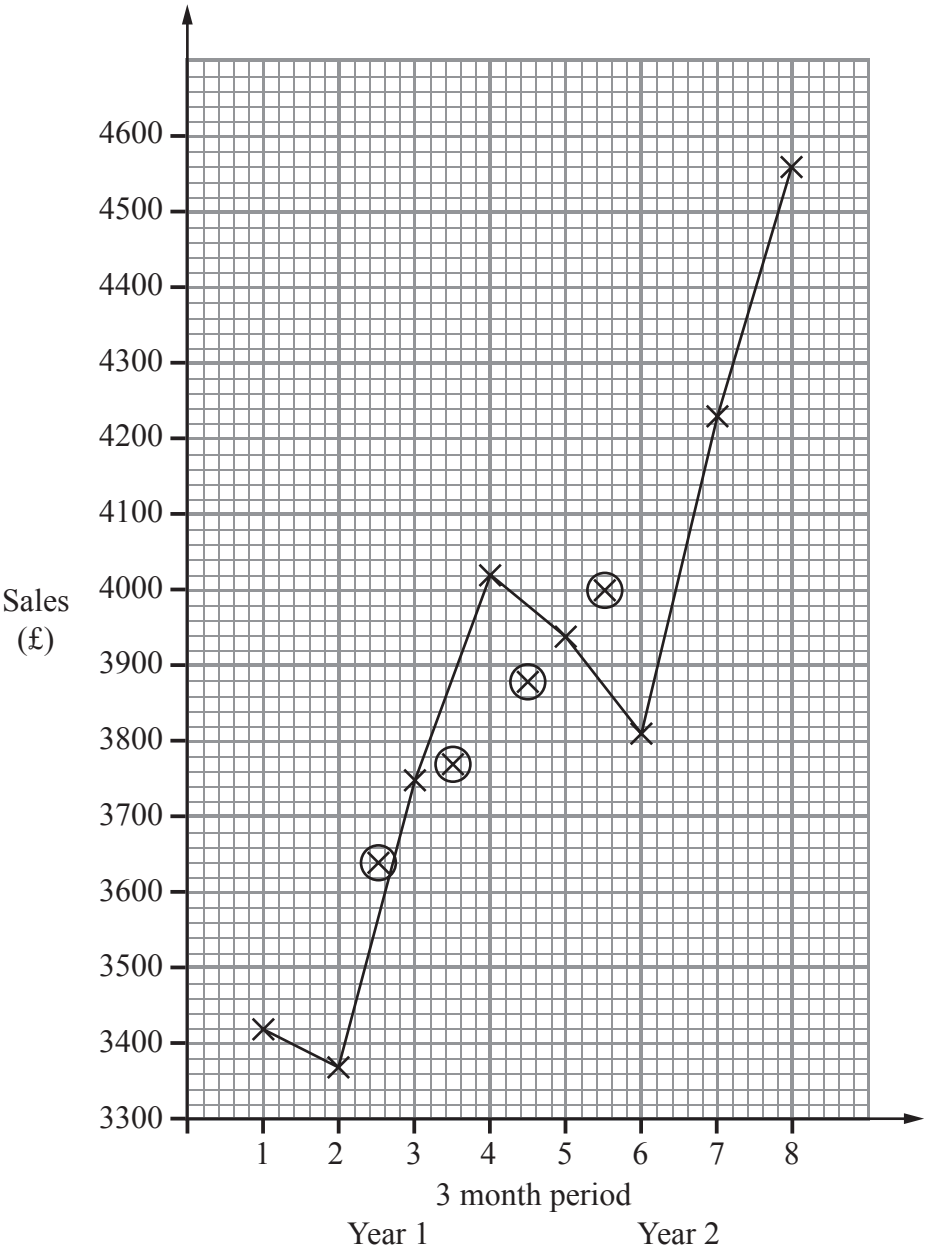
The time series graph shows Joe's sales for the last two years.
The first four 4-point moving averages have been plotted on the grid.

(b) Plot the fifth 4-point moving average.

(1)

(c) Draw a trend line for this data.

(1)

Sales
(£)

3 month period

Year 1   Year 2

(Total 4 marks)

TOTAL FOR SECTION A: 15 MARKS

END

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