

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
3	
4	
5	
6	
TOTAL	



General Certificate of Education
Advanced Level Examination
June 2012

Mathematics

MS04

Unit Statistics 4

Monday 25 June 2012 1.30 pm to 3.00 pm

For this paper you must have:

- the blue AQA booklet of formulae and statistical tables.

You may use a graphics calculator.

Time allowed

- 1 hour 30 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.
- Write the question part reference (eg (a), (b)(i) etc) in the left-hand margin.
- You must answer each question in the space provided for that question. If you require extra space, use an AQA supplementary answer book; do **not** use the space provided for a different question.
- Do not write outside the box around each page.
- Show all necessary working; otherwise marks for method may be lost.
- Do all rough work in this book. Cross through any work that you do not want to be marked.
- The **final** answer to questions requiring the use of tables or calculators should normally be given to three significant figures.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 75.

Advice

- Unless stated otherwise, you may quote formulae, without proof, from the booklet.
- You do not necessarily need to use all the space provided.



J U N 1 2 M S 0 4 0 1

Answer **all** questions.

Answer each question in the space provided for that question.

- 1** An angler is investigating the breaking strength of nylon fishing line. The angler collects samples from each of two retail outlets: *Hot Rods* and *The Reel Deal*. For each sample, he measures the breaking strengths in kilograms. The results are shown in the table.

<i>Hot Rods</i>	6.314	6.242	6.725	6.782	6.582	6.173	6.467	5.830	6.145
<i>The Reel Deal</i>	6.435	6.403	6.155	7.074	6.709	6.540	6.303	6.768	

Assuming that the measurements are independent random samples from two normal distributions having the same variance, test, at the 10% level of significance, the assertion that the mean breaking strength of nylon fishing line is the same for line supplied by *Hot Rods* as it is for line supplied by *The Reel Deal*. (10 marks)

QUESTION
PART
REFERENCE

Answer space for question 1



QUESTION
PART
REFERENCE

Answer space for question 1

A large rectangular area containing horizontal dotted lines for writing an answer.



QUESTION
PART
REFERENCE

Answer space for question 2

A large rectangular area with horizontal dotted lines for writing an answer.

Turn over ►



QUESTION
PART
REFERENCE

Answer space for question 3

Area with horizontal dotted lines for writing the answer.

Turn over ►



QUESTION
PART
REFERENCE

Answer space for question 3

A large rectangular area containing horizontal dotted lines for writing an answer.



QUESTION
PART
REFERENCE

Answer space for question 4

A large rectangular area with horizontal dotted lines for writing an answer.

Turn over ►



QUESTION
PART
REFERENCE

Answer space for question 4

A large rectangular area with horizontal dotted lines for writing an answer.



QUESTION
PART
REFERENCE

Answer space for question 5

A large rectangular area with horizontal dotted lines for writing an answer.

Turn over ►



QUESTION
PART
REFERENCE

Answer space for question 5

A large rectangular area with horizontal dotted lines for writing an answer.



QUESTION
PART
REFERENCE

Answer space for question 5

A large rectangular area with horizontal dotted lines for writing an answer.

Turn over ►



