

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 Subsidiary Examination  
June 2012

# Mathematics

# MS/SS1A/W

## Unit Statistics 1A

# Statistics

## Unit Statistics 1A

Friday 18 May 2012 9.00 am to 10.15 am

**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 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.
- 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 60.
- Unit Statistics 1A has a **written paper and coursework**.

### Advice

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



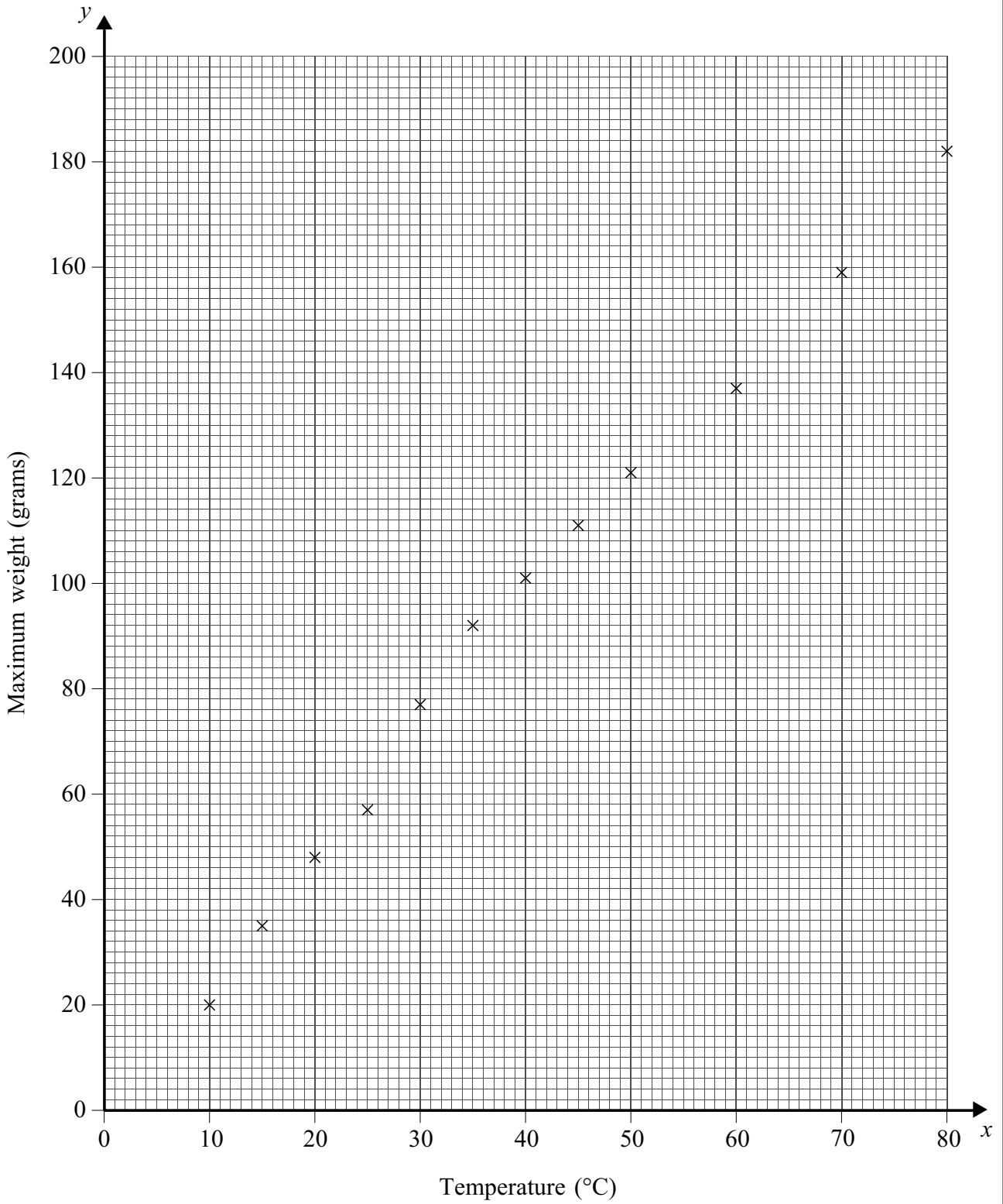
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### Temperatures and Maximum Weights



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QUESTION  
PART  
REFERENCE

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- 3** A survey of the 640 properties on an estate was undertaken. Part of the information collected related to the number of bedrooms and the number of toilets in each property.

This information is shown in the table.

		Number of toilets				Total
		1	2	3	4 or more	
Number of bedrooms	1	46	14	0	0	60
	2	24	67	23	0	114
	3	7	72	99	16	194
	4	0	19	123	48	190
	5 or more	0	0	11	71	82
Total		77	172	256	135	640

- (a)** A property on the estate is selected at random.

Find, giving your answer to three decimal places, the probability that the property has:

- (i)** exactly 3 bedrooms; *(1 mark)*
- (ii)** at least 2 toilets; *(2 marks)*
- (iii)** exactly 3 bedrooms and at least 2 toilets; *(2 marks)*
- (iv)** at most 3 bedrooms, given that it has exactly 2 toilets. *(3 marks)*
- (b)** Three properties are selected at random from those on the estate which have exactly 3 bedrooms.

Calculate the probability that one property has 2 toilets, one has 3 toilets and the other has at least 4 toilets. Give your answer to three decimal places. *(4 marks)*





QUESTION  
PART  
REFERENCE

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QUESTION  
PART  
REFERENCE

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QUESTION  
PART  
REFERENCE

**Answer space for question 4**

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QUESTION  
PART  
REFERENCE

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QUESTION  
PART  
REFERENCE

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ANSWER IN THE SPACES PROVIDED**

