



**OXFORD CAMBRIDGE AND RSA EXAMINATIONS**

**General Certificate of Secondary Education**

**MATHEMATICS A**

**A501/01**

Unit A (Foundation)

**Specimen Mark Scheme**

The maximum mark for this paper is **60**.

This document consists of **8** printed pages.

1	(a)	5·40	1	Allow in words, 24 hr clock, etc
	(b)	48·3 to 48·7	1	Allow fractions
	(c)	13·6 to 13·8	1	Allow 136 to 138 mm
2	(a)	Any two multiples of 12	1	eg 12 and 24
	(b)	1, 2, 5, 10 only	2	Allow 1 for 3 correct or extras seen
	(c)	29	1	
3	(a)	(i) $5r$	1	
		(ii) $q^2$	1	
	(b)	$4a + 2b$	2	Allow 1 for $a + a + a + a + b + b$ (condone one term missing) or for $4a$ or $2b$
4	(a)	One hundred (and) twenty two thousand	1	
	(b)	16 010	1	
	(c)	Arrow in middle third of 4 <sup>th</sup> quarter between 1300 and 1400	1	
	(d)	100	1	
	(e)	44	1	
5	(a)	4·7	1	
	(b)	1·728	1	
	(c)	4·4	2	Allow 1 for 4·3(8...)
6		Cinema, Hodge's, £54·20	6	<p><i>Taxi costs</i></p> <p>Eddie's - £28 theatre, £44·80 cinema Hodge's - £32 theatre, £39·20 cinema</p> <p><b>B2</b> for 3 or 4 correct or <b>B1</b> for 1 or 2 correct</p> <p><i>Ticket costs</i></p> <p>Theatre £28, Cinema £15, Concert £55</p> <p><b>B2</b> for 3 correct or <b>B1</b> for 1 or 2 correct</p> <p><i>Total cost</i></p> <p><b>B2</b> for correct choices and total or <b>B1</b> for any correct total</p>

7	(a)	5	1	
	(b)	-4	1	
	(c)	10	2	<b>M1</b> for $3z = 30$
8		520, 3200	2	1 for each
9	(a)	10	1	
	(b)	5	3	Or <b>M2</b> for $(2 + 2 + \dots + 12)/9$ or $45/9$ Or <b>M1</b> for $2 + 2 + \dots + 12$ or $45$
10	(a)	11111 1112 1121 1211 2111 122 212 221	2	Allow 1 for 6 seen (ignore repeats)
	(b)	13	1	
11		Sides within 2mm, arcs visible	3	Or <b>B1</b> for 5cm or 6cm correct length And <b>M1</b> for sensible attempt at arcs
12	(a)	Perpendicular bisector drawn with arcs ( $\pm 2^\circ$ , $\pm 2\text{mm}$ ). At least one correct point indicated	3	Or <b>M1A1</b> for bisector only Or <b>M1</b> if outside tolerance but arcs clear Or <b>SC1</b> if no construction and at least one correct position indicated
	(b)	Correct area indicated, scale correct	3	Or <b>B1</b> for (at least) one semicircular arc radius 4cm And <b>B1</b> for 2 straight lines at least 6cm long, 4cm from the sprinkler and parallel

13	(a)	Potatoes in this class must be <b>greater than</b> 100	<b>1</b>	
	(b)	48/4	<b>1</b>	
	(c)	6	<b>1</b>	
	(d)			<p>KE(0 small), MP(12/90 small), D(0 small)  Mean 255, 236.6, 303  Mode 2-300, 2-300, 3-400 (or 330)  Median 2-300, 2-300, 325</p> <p><b>2</b> Consideration of small potatoes <b>B2, 1, 0</b>  <b>4</b> Calculation of averages <b>B4, 3, 2, 1, 0</b>  (means using mid-interval and attempts to estimate a value for median within class can score up to 4 marks, medians up to 3, modes up to 2)</p> <p><b>1</b> Comparison of at least 2 averages (same type) <b>B1</b>  <b>2</b> Interpretation of results <b>B2, 1, 0</b></p>

### Assessment Objectives and Functional Elements Grid

GCSE MATHEMATICS A

A501/01: Unit A (Foundation)

Qn	Topic	AO1	AO2	AO3	Functional
1	Measures		3		
2	Factors & Multiples	4			
3	Expressions	4			
4	Writing numbers	5			
5	Using a calculator	4			
6	Cost of a night out			6	6
7	Equations	4			
8	Change of units	2			
9	Mean & range	4			
10	Sequence		3		
11	Triangle construction	3			
12	Loci		6		3
13	Statistics		7	5	9
	TOTAL	30	19	11	18

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