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.

SPECIMEN

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 4th 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	*Taxi costs*
				Eddie's - £28 theatre, £44·80 cinema
				Hodge's - £32 theatre, £39·20 cinema
				B2 for 3 or 4 correct or **B1** for 1 or 2 correct
				Ticket costs
				Theatre £28, Cinema £15, Concert £55
				B2 for 3 correct or **B1** for 1 or 2 correct
				Total cost
				B2 for correct choices and total or **B1** for any correct total

7	(a)	5	**1**	
	(b)	⁻4	**1**	
	(c)	10	**2**	**M1** for $3z = 30$
8		520, 3200	**2**	**1** for each
9	(a)	10	**1**	
	(b)	5	**3**	Or **M2** for (2 + 2 +…+ 12)/9 or 45/9 Or **M1** for 2 +2 +…+ 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 **B1** for 5cm or 6cm correct length And **M1** for sensible attempt at arcs
12	(a)	Perpendicular bisector drawn with arcs ($\pm 2°$, ± 2mm). At least one correct point indicated	**3**	Or **M1A1** for bisector only Or **M1** if outside tolerance but arcs clear Or **SC1** if no construction and at least one correct position indicated
	(b)	Correct area indicated, scale correct	**3**	Or **B1** for (at least) one semicircular arc radius 4cm And **B1** for 2 straight lines at least 6cm long, 4cm from the sprinkler and parallel

13	(a)	Potatoes in this class must be **greater than** 100	1	
	(b)	48/4	1	
	(c)	6	1	
	(d)			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
			2	Consideration of small potatoes **B2**, **1**, **0**
			4	Calculation of averages **B4**, **3**, **2**, **1**, **0** (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)
			1	Comparison of at least 2 averages (same type) **B1**
			2	Interpretation of results **B2**, **1**, **0**

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