UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the November 2005 question papers

0580/0581 MATHEMATICS

0580/01, 0581/01   Paper 1 (Core), maximum raw mark 56

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which Examiners were initially instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began. Any substantial changes to the mark scheme that arose from these discussions will be recorded in the published *Report on the Examination*.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes must be read in conjunction with the question papers and the *Report on the Examination*.

- CIE will not enter into discussion or correspondence in connection with these mark schemes.

The minimum marks in these components needed for various grades were previously published with these mark schemes, but are now instead included in the Report on the Examination for this session.

CIE is publishing the mark schemes for the November 2005 question papers for most IGCSE and GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

UNIVERSITY *of* CAMBRIDGE
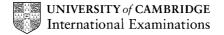International Examinations

TYPES OF MARK

Most of the marks (those without prefixes, and 'B' marks) are given for accurate results, drawings or statements.

- **M** marks are given for a correct method.

- **B** marks are given for a correct statement or step.

- **A** marks are given for an accurate answer following a correct method.

ABBREVIATIONS

a.r.t.	Anything rounding to
b.o.d.	Benefit of the doubt has been given to the candidate
c.a.o.	Correct answer **only** (i.e. no 'follow through')
e.e.o.	Each error or omission
f.t.	Follow through
i.s.w.	Ignore subsequent working
o.e.	Or equivalent
SC	Special case
s.o.i.	Seen or implied
ww	Without working
www	Without wrong working
$\sqrt{}$	Work followed through after an error: no further error made

Page 1	Mark Scheme	Syllabus	Paper
	IGCSE – NOVEMBER 2005	0580/0581	1

Question	Answers	Mark	Notes
1	$1.01(00) \times 10^4$	1	
2	$x(3y - 2)$	1	
3	6950	1	
4	$\sqrt{5}$	1	
5	$5x = 8 + 7$ or better seen.	M1	(Correct first step)
	(x =) 3	A1	
6	12	2	SC1 correct method seen $1\frac{1}{2} \div \frac{1}{8}$ or better.
7 (a)	10 (allow –10)	1	
(b)	12	1	
8	$P - 2b = 2a$	M1	
	$\dfrac{P - 2b}{2}$ oe	A1	
9 (a)	$\dfrac{7}{100}$	1	Allow 0.07 or 7%
(b)	72%	1	Allow 0.72 or $\dfrac{72}{100}$
(c)	0.072 and 7.2%	1 [15]	In this form.
10 (a)	61 or 67	1	
(b)	63	1	
(c)	64	1	
11 (a)	$\begin{pmatrix} 5 \\ -2 \end{pmatrix}$	2	1 mark for each correct component.
(b)	Correct Vector Drawn	1	
12	$\sin 21° = \dfrac{\text{height}}{1.2}$ oe or better	M1	(alt. method) 1200 seen **B1** C's 1200 sin 21° **M1** 430 (.0...) **A1 f.t.**
	0.43(0……)	A1	
	430(.0….)	B1ft	
13	(Decrease) 200 000	B1	(alt. method) $\dfrac{2500000}{2700000} \times 100$ or 92.5 **B1** subtract answer from 100 **M1**
	$\dfrac{\text{Their } 200\ 000}{2700\ 000} \times 100$	M1	
	7.41 or 7.40(7….)	A1	
14 (a)	>	1	
(b)	<	1	
(c)	<	1 [15]	

Question	Answers	Mark	Notes
15 (a)	0.5 not 0.50	1	
(b)(i)	$10 - 6 \times$ c's $0.5 = 7$	1f.t.	Only f.t. c's **(a)** if it is 0.4 (0) or 0.50 or 0
(ii)	7.0908	1	Allow 7.6 or 8 from 0.4
16 (a)	$3r - 3s$ or $3(r - s)$	1	
(b)	q or q^1	1	
(c)	p^4	1	
17 (a)	A clear attempt to multiply each by 3 and add, or equivalent.	M1	
	60	A1	
(b)	9	1f.t.	Must be a clear use of Dalila's intended total from **(a)** subtract 12
18 (a)	160	1	
(b)	Their **(a)** $\div \pi$	M1	
	50.9(…..) or 51	A1	
19 (a)	29.25 or 29.2 or 29.3	1	
(b)	18	1	
(c)	Their **(a)** $\div 2.20$	M1	Implied by 13.3 or 13.2 (...) seen
	14	A [16]	
20 (a)	$35 \div 100 \times 900$	M1	
	$=315$	A1	
(b)	(Payments) 720	B1	Implied by 1035 seen
	Deposit + Payments – 900	M1	
	135	A1 f.t.	No follow through for negative answer
21 (a)	62	1	
(b)	$2\frac{1}{2}$	1	
(c)(i)	Ruled line through (0, 0) and (1, 16)	B1	
	Through and further than (5, 80)	B1	Dependent
(ii)	5	1f.t. [10]	Intersection of their line with the given line.