CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2013 series

0444 MATHEMATICS

0444/11 Paper 1 (Core), maximum raw mark 56

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2013 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

Abbreviations

cao correct answer only
cso correct solution only
dep dependent
ft follow through after error
isw ignore subsequent working
oe or equivalent
SC Special Case
www without wrong working
soi seen or implied

Qu	Part	Answers	Mark	Part Marks
1		121 042	**1**	
2		250	**1**	
3	**(a)** **(b)**	42 000 10 381 cao	**1** **1**	
4	**(a)** **(b)**	2 Both lines drawn	**1** **1**	
5	**(a)** **(b)**	(4, 1) Point plotted at (–1, 3)	**1** **1**	
6		$3a - 4b$ Final answer	**2**	**B1** for answer $3a \pm jb$ **or** $ka - 4b$, $j, k \neq 0$ **or SC1** for answer reached in working then spoilt
7		125	**2**	**B1** for 55 **or** 125 in any other correct position on diagram **or M1** for 180 – 55
8		$[x =]$ 18 $[y =]$ 7	**1** **1**	After zero, **SC1** for answers reversed
9		6.6(0)	**2**	**M1** for 44 × 0.15 oe **or** 4.4 + 2.2
10	**(a)** **(b)**	$\frac{3}{4}$ oe 1	**1** **1**	
11		4.8 oe	**2**	**M1** for $5 + 19 = 3x + 2x$ oe **or** better **or B1** $24 - 2x = 3x$ oe **or** $5 = 5x - 19$ oe
12		[Other angle could be] 84	**2**	**M1** for 180 – (48 + 48) **or SC1** shows that two angles of 66 are needed to make an isosceles triangle

13	**(a)**	4	**1**	
	(b)	13	**1**	
	(c)	7 nfww	**2**	**M1** for a correctly ordered list of at least 8 numbers
14	**(a)**	$\frac{2}{6}$ oe	**1**	
	(b)	200 Final answer	**2FT**	**M1** for $600 \times$ *their* **(a)**
15		944 cao	**3**	**M1** for $800 \times 6 \times \frac{3}{100}$ oe **A1** for 144 **A1 FT Dependent** on M1 scored for *their* 144 + 800 evaluated
16	**(a)**	Ruled perpendicular line through P	**1**	± 2°
	(b)	Correct ruled line drawn with 2 correct sets of arcs	**2**	**B1** for correct line without correct arcs **or** for 2 sets of correct arcs with no line
17	**(a)**	–1	**1**	
	(b)	$y = 11 - x$ oe Final answer	**2**	**M1** $y = 11 - mx$ oe **or** $y = c - x$ oe **or** $11 - x$
18	**(a)**	$\frac{9}{12} - \frac{1}{12}$ oe	**M1**	Must be shown.
		[=] $\frac{8}{12}$ oe [=] $\frac{2}{3}$	**M1**	Both fractions must be shown
	(b)	$\frac{5}{2} \times \frac{4}{25}$ oe Cancelling shown **or** $\frac{20}{50}$ oe [=] $\frac{2}{5}$	**M1** **M1**	Must be shown **Dependent** and cancelling shown **or** a fraction and then $\frac{2}{5}$ must be shown
19	**(a)**	6b($a - 4c$) Final answer	**2**	**B1** for answer $6(ab - 4bc)$ **or** $3b(2a - 8c)$ **or** $2b(3a - 12c)$ **or** b$(6a - 24c)$
	(b)	$n(j + k)$ **or** $nj + nk$ oe Final answer	**2**	**M1** for one correct step of a two step method **or SC1** for $[m] = k + jn$ **or** $[m] = j + kn$

20	**(a)**	**(i)** 11	**1**	
		(ii) subtract 4 oe	**1**	
	(b)	2, 6, 10 cao	**1**	
	(c)	$3n - 4$ oe	**2**	**B1** for answer $3n \pm k$, where k is an integer
21	**(a)**	[a =] 8 [b =] 10	**1** **1**	
	(b)	Correct line over correct domain	**1FT** **1**	FT *their* **(a)** and **(b)**
	(c)	7.75 isw **or** $7.5 < x < 8$	**1FT**	