

**CAMBRIDGE INTERNATIONAL EXAMINATIONS**  
International General Certificate of Secondary Education

**MARK SCHEME for the May/June 2014 series**

<b>0581 MATHEMATICS</b>	
<b>0581/11</b>	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 May/June 2014 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

Page 2	Mark Scheme	Syllabus
	IGCSE – May/June 2014	0581

**Abbreviations**

- cao correct answer only
- dep dependent
- FT follow through after error
- isw ignore subsequent working
- oe or equivalent
- SC Special Case
- nfww not from wrong working
- soi seen or implied

Qu.	Part	Answers	Mark	Part Marks
1		4	1	
2		23 29	1	
3	(a)	138	1	
	(b)	Obtuse	1	
4	(a)	506 000	1	
	(b)	$5.06 \times 10^5$	1FT	
5	(a)	$\frac{5 \times 2}{20}$	1	
	(b)	0.5 or $\frac{1}{2}$ cao	1	
6		30	2	M1 for $n - 8 = 22$ or $\frac{n}{2} = 15$
7		$\begin{pmatrix} 6 \\ -13 \end{pmatrix}$	2	B1 for each component  or for $\begin{pmatrix} -2 \\ 10 \end{pmatrix}$ or $\begin{pmatrix} 2 \\ -10 \end{pmatrix}$ seen
8		454.5 455.5	1, 1	SC1 for both correct but reversed
9		$18 \frac{1}{18}$	2	M1 for $\frac{2}{36} + \frac{36}{2}$ or better
10		1.37	2	B1 for 0.866... or $\frac{\sqrt{3}}{2}$ or 0.5 or $\frac{1}{2}$  or B1 for 1.366... as final answer
11		6	2	M1 for $720 = 8 \times 15 \times h$ or better

Page 3	Mark Scheme	Syllabus
	IGCSE – May/June 2014	0581

12	(a)	Negative	1	
	(b)	More rain [suggests] lower temperature oe	1	
13		114 to 117	2	<b>B1</b> for 38 to 39 seen or 72 [mph]
14	(a)	74	2	<b>M1</b> Angle $B = 180 - 127$
	(b)	53	<b>1FT</b>	127 – <i>their</i> part (a)
15		1.6[0]	3	<b>M1</b> for $800 \times 1.5$ and <b>M1</b> for <i>their</i> $1200 \div 750$
16	(a) (i)	$p^{10}$	1	
	(ii)	$t^{-3}$ or $\frac{1}{t^3}$	1	
	(b)	4	1	
17	(a)	Angle [in a] semi-circle	1	
	(b)	19.2 or 19.23 to 19.24	2	<b>M1</b> for $17^2 + 9^2$
18	(a)	$\frac{16}{5}$ and $\frac{21}{8}$ oe	$\frac{8}{40}$ and $\frac{25}{40}$ oe	<b>M1</b>
		$\frac{128}{40} - \frac{105}{40}$ oe	$\frac{40}{40} + \frac{8}{40} - \frac{25}{40}$ oe	<b>M1</b>
	(b)	<b>or</b> $\frac{8 \times \text{their } 16}{40} - \frac{5 \times \text{their } 21}{40}$ oe with numerators evaluated	$\frac{7}{8} \times \frac{40}{23}$ oe  $1\frac{12}{23}$ cao	<b>M1</b>  <b>A1</b>
19	(a) (i)	40.3	1	
	(ii)	-3.3	2	<b>M1</b> for attempt at ordering seen
	(b)	$\frac{7}{12}$ oe isw	1	

<b>Page 4</b>	<b>Mark Scheme</b>	<b>Syllabus</b>
	<b>IGCSE – May/June 2014</b>	<b>0581</b>

<b>20</b>	<b>(a)</b>	119	<b>3</b>	<b>M2</b> for $18 \times 6 + 11$ oe or <b>B1</b> for 18 or 11 or 108
	<b>(b)</b>	[0]1 [00] pm cao	<b>1</b>	
<b>21</b>	<b>(a)</b>	177 or 176.7 to 176.74	<b>2</b>	<b>M1</b> for $\pi \times 7.5^2$
	<b>(b)</b>	4 correct lines of symmetry drawn	<b>2</b>	<b>B1</b> for 2 correct and no extra lines
<b>22</b>	<b>(a)</b>	52.6	<b>2</b>	<b>M1</b> for $\sin [ ] = \frac{27}{34}$
	<b>(b)</b>	127 or 127.4[...]	<b>2FT</b>	180 – <i>their</i> part (a) <b>B1</b> for [BAC =] 90 – <i>their</i> part (a)