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Cambridge International General Certificate of Secondary Education

MATHEMATICS

0580/13

Paper 1 (Core)

October/November 2016

MARK SCHEME

Maximum Mark: 56

Published

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This document consists of **4** printed pages.

Page 2	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2016	0580	13

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

Question	Answer	Mark	Part marks
1	5 034	1	
2	-3	1	
3	36	1	
4	n^7 final answer	1	
5	947.5, 948.5	2	B1 for either or both correct but reversed
6 (a)	2.47×10^6	1	
(b)	7.9×10^{-3}	1	
7	0.4^2 0.6^3 0.22 $\sqrt{0.09}$	2	M1 for decimal conversion 0.216 and 0.3 and 0.16
8	Thursday	2	M1 for 5.4 found or at least two of: 3.8, 3.6 and 4 found
9 (a)	A	1	
(b)	A ruled line joining (65, 23) to (80, 28)	1	
10	$\frac{18}{30}$ and $\frac{5}{30}$ oe must be shown	M1	$\frac{18k}{30k}$ and $\frac{5k}{30k}$
	$\frac{23}{30}$ cao	A1	
11	40	2	M1 for $\frac{x}{16} = \frac{30}{12}$ or $\frac{x}{30} = \frac{16}{12}$ oe or 2.5 or 0.4 or 1.33[3...] or $\frac{16}{12}$
12 (a)	18.3	1	
(b)	128	1	

Page 3	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2016	0580	13

Question	Answer	Mark	Part marks
13 (a)	172	1	
(b)	166	2	M1 for an ordered list of at least 5 numbers or B1 for 164 and 168 identified
14 (a)	0.6	1	
(b)	$\frac{12}{25}$	2	B1 for $\frac{48}{100}$ or equivalent fraction
15 (a)	2644.32	1	
(b)	133.42	2	M1 for $4200 \div 31.48$
16 (a) (i)	$\frac{5}{12}$ oe	1	
(ii)	0	1	
(b)	[0].65 oe	1	
17	36	3	M2 for $5 \times 3 + 7.5 + 9.5 + 4$ oe or M1 for two of 5, 7.5, 9.5 and 4
18 (a)	$\binom{2}{1}$	1	
(b)	$\binom{2}{4}$	1	
(c)	(6, 10)	1	
19 (a)	30	1	
(b)	47.5	2	M1 for 4.5×5 oe
20 (a)	68	1	
(b)	9	2	M1 for $360 \div 40$ oe or $\frac{180(n-2)}{n} = 140$ oe

Page 4	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2016	0580	13

Question	Answer	Mark	Part marks
21 (a)	Three correct, ruled lines	2	B1 for two correct lines
(b) (i)	Drawing a rectangle or rhombus	1	
(ii)	FT their quadrilateral in (b)(i)	1	
22 (a)	40.2 or 40.21 to 40.22	2	M1 for $2 \times \pi \times 6.4$ oe
(b)	1540 or 1544 or 1544.1 to 1544.4	2	M1 for $\pi \times 6.4^2 \times 12$
23	[x =] 5 [y =] -2	4	<p>M1 for correctly equating one set of coefficients</p> <p>M1 for correct method to eliminate one variable</p> <p>A1 for $x = 5$</p> <p>A1 for $y = -2$</p> <p>If zero scored, SC1 for 2 values satisfying one of the original equations.</p> <p>or</p> <p>SC1 if no working shown, but 2 correct answers given</p>