



Cambridge Assessment International Education

Cambridge International General Certificate of Secondary Education

MATHEMATICS
Paper 1 (Core)
MARK SCHEME
Maximum Mark: 56

Published

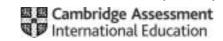
This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, 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 International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the October/November 2017 series for most Cambridge IGCSE[®], Cambridge International A and AS Level components and some Cambridge O Level components.

® IGCSE is a registered trademark.



Cambridge IGCSE – Mark Scheme **PUBLISHED**



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	Marks	Partial marks
_			T III CAR IIII II
1	101	1	
2	9944	1	
3	2	1	
4	88	2	M1 for $\frac{68+81+74+89+x}{5} = 80$ oe
			or B1 for 400
5(a)	18.8 cao	1	
5(b)	19 cao	1	
6	1.5 oe	2	B1 for 2.25 oe
7	3x (4x + 5y - 3) final answer	2	B1 for $3(4x^2 + 5xy - 3x)$ or $x(12x + 15y - 9)$ allow in working or correct answer spoiled
			If zero scored, SC1 for $3x(4x + 5y - 3)$ with only 2 correct elements in the brackets, allow in working
8	14.25 14.35	2	B1 for each correct or both correct but reversed
9	63.6 or 63.61 to 63.63	2	M1 for $\pi \times 4.5^2$
10(a)	(-2, 3)	1	
10(b)	Correct rhombus with 4th point at (2,2)	1	
11(a)	$\frac{5}{9}$ cao	1	
11(b)	[0].09 then 9 [%]	2	B1 for each

© UCLES 2017

Cambridge IGCSE – Mark Scheme **PUBLISHED**

Question	Ans	wer	Marks	Partial marks
12	$\frac{5}{3}$	$\frac{2}{3} + \frac{4}{15}$	B1	Allow $\frac{5k}{3k}$
	$\frac{25}{15}$ [and $\frac{11}{15}$]	$\frac{10}{15}$ [and $\frac{4}{15}$]	M1	Correct method to find common denominator e.g. $\frac{75}{45}$ and $\frac{33}{45}$
				Follow through <i>their</i> $\frac{5}{3}$ for the M1 mark
	$\frac{14}{15}$ cao	$\frac{14}{15}$ cao	A1	
13(a)	343		1	
13(b)	-11		1	
13(c)	343		1	
14(a)	$\begin{pmatrix} 2 \\ 7 \end{pmatrix}$		1	
14(b)	$\begin{pmatrix} 2 \\ 5 \end{pmatrix}$		1	
14(c)	$\begin{pmatrix} 8 \\ 20 \end{pmatrix}$		1	
15	54		3	M2 for $\frac{180 \times (5-2)}{5}$ or $180 - \frac{360}{5}$
				or M1 for $180 \times (5-2)$ or $\frac{360}{5}$
16	16.1 or 16.12 to 16.13		3	M2 for $\sqrt{(18^2 - 8^2)}$ or better
				or M1 for $18^2 = []^2 + 8^2$ or better
17(a)	m^{10} final answer		1	
17(b)	$20x^5y^2$ final answer	r	2	B1 for 2 out of 3 elements correct in final answer or correct answer spoiled

Cambridge IGCSE – Mark Scheme **PUBLISHED**

0580/11	Cambridge IGCSE – Mark Scheme PUBLISHED On Answer Marks Partial marks Correct method to eliminate one variable					
Question	Answer	Marks	Partial marks			
18	Correct method to eliminate one variable	M1				
	[x=]-2	A1				
	[y =] 3	A1	If zero scored, SC1 for both correct but no or wrong working or SC1 for 2 values satisfying one of the original equations			
19(a)(i)	99° 63° 36°	3	B1 for each or M1 for 162 ÷ 18 or 360 ÷ 40 or better If zero scored, SC1 for 3 angles that add to 198			
19(a)(ii)	Correct labelled pie chart	1FT	FT <i>their</i> table if <i>their</i> angles add to 198			
19(b)	$\frac{252}{360}$ or better fraction isw	1				
20(a)	71.48	2	M1 for 12.8 × 10.4 or 9.2 × 6.7			
			or for an area of a suitable rectangle from shaded area			
20(b)	132	3	M2 for $2 \times (8 \times 2 + 2 \times 5 + 8 \times 5)$ oe			
			or M1 for at least two of 8×2 , 8×5 and 2×5			
21(a)(i)	Correct ruled bisector with two pairs of correct arcs	2	B1 for correct ruled bisector missing/wrong arcs or 2 pairs of correct arcs			
21(a)(ii)	Correct ruled perpendicular bisector with two pairs of correct arcs	2	B1 for correct ruled bisector missing/wrong arcs or 2 pairs of correct arcs			
21(b)	Correct region shaded	1	Dep. on at least B1 in (a)(i) and B1 in (a)(ii)			