



MATHEMATICS

0626/01

Paper 1

October/November 2017

MARK SCHEME

Maximum Mark: 60

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.

This syllabus is regulated for use in England as a Cambridge International Level 1/Level 2 (9–1) Certificate.

This document consists of **5** printed pages.

MARK SCHEME NOTES

The following notes are intended to aid interpretation of mark schemes in general, but individual mark schemes may include marks awarded for specific reasons outside the scope of these notes.

Types of mark

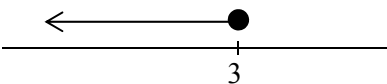
- M Method marks, awarded for a valid method applied to the problem.
- A Accuracy mark, awarded for a correct answer or intermediate step correctly obtained. For accuracy marks to be given, the associated Method mark must be earned or implied.
- B Mark for a correct result or statement independent of Method marks.

When a part of a question has two or more ‘method’ steps, the M marks are in principle independent unless the scheme specifically says otherwise; and similarly where there are several B marks allocated. The notation ‘**dep**’ is used to indicate that a particular M or B mark is dependent on an earlier mark in the scheme.

Abbreviations

awrt	answers which round to
cao	correct answer only
dep	dependent
FT	follow through after error
isw	ignore subsequent working
nfww	not from wrong working
oe	or equivalent
rot	rounded or truncated
SC	Special Case
soi	seen or implied

Question	Answer	Marks	Part Marks
1	7.52	2	M1 for 2.48 or 248 or $10 - 0.99 - 1.49$ oe soi
2(a)	8	1	
2(b)	15 or –15	1	
2(c)	–13	2	M1 for –65 or $\frac{\textit{their sum}}{5}$ If 0 scored, SC1 for answer 13
3(a)	43	1	
3(b)	2 hours 8 mins	3	M1 for 11 45 oe or correct bus identified e.g. by 12 19 or 13 53 used M1 for <i>their</i> 13 53 – <i>their</i> 11 45 soi M1 for <i>their</i> time in minutes correctly converted to hours and minutes Max 2 marks if answer incorrect
4(a)	14 16 ### // 10	2	B1 for 2 or 3 correct entries
4(b)	Football	1	
4(c)	12	1	FT their frequencies
4(d)	Valid explanation	1	
5(a)	[Triangular] prism	1	
5(b)	Congruent shape drawn	1	
6(a)	83	1	
6(b)	–0.601	2	B1 for –0.6[005...] or for <i>their</i> value with > 3 decimal places correctly rounded to 3 decimal places SC1 for answer 2.089 or answer 0.601
7(a)	Correct shape in correct position	2	B1 for correct shape, incorrect position or at least 3 correct vertices
7(b)	0 3	2	B1 for each
8(a)	45 $24^2 - 23^2$ 47 $25^2 - 24^2$ 49	2	B1 for either of the bottom two rows correct If 0 scored, SC1 for all numbers correct with missing or incorrect signs
8(b)(i)	$97^2 - 96^2 = 193$	1	
8(b)(ii)	Valid explanation	1	

Question	Answer	Marks	Part Marks
8(c)	Two million [and] one	1	
9	The three scores converted to the same form with convincing comparison	3	M2 for 3 scores correctly converted to the same form for comparison or M1 for one score correctly converted
10(a)	5, 10, 15, 20	1	
10(b)	4	1	FT <i>their</i> (a)
10(c)	5	1	
11	[$V =$] $6.5 \times 6.5 \times 10$	M1	
	[$m =$] $2.5 \times \text{their } 422.5$	M1	
	$= 1056[.25]$ [g]	A1	
	Compares <i>their</i> mass with 1 kg using consistent units e.g. $1.056 \text{ kg} > 1 \text{ kg}$	B1	
12	141 or 141.3 to 141.4	2	M1 for $\pi \times 3^2 \times 5$ soi
13(a)	$x \leq 3$ final answer	2	M1 for $7x \leq 19 + 2$ M1 for $x \leq \frac{b}{a}$ after $ax \leq b$ seen max 1 mark if answer incorrect If 0 scored, SC1 for answer 3 or $x \dots 3$ with any incorrect equality or inequality symbol or answer $7 \times 3 - 2 \leq 19$
13(b)		1	FT <i>their</i> inequality in (a)
14	1.5 oe	3	M1 for $8 - 2x = 5$ or $56 - 14x = 35$ M1 for collecting <i>their</i> like terms M1 for $x = \frac{b}{a}$ after $ax = b$ seen max 2 marks if answer incorrect
15	Number (order) each student from 1 to 360 Choose every 18th student	2	B1 for incomplete explanation or 18 seen If 0 scored, SC1 for details of how to select a random sample
16	58.4 to 58.5	4	M1 for $\pi \times 4.9^2 [\div 2]$ M1 for $2 \times 10.1 \times 15.2$ or $3 \times 10.1 \times 15.2$ soi M1 for <i>their</i> shaded area \div <i>their</i> total area
17	$14x^7y^4$ final answer	2	B1 for x^7 or y^4 seen in answer

Question	Answer	Marks	Part Marks
18	$c = \frac{S - 3dh}{d}$ final answer or $c = \frac{S}{d} - 3h$ final answer	2	M1 for $S - 3dh = cd$ or $\frac{S}{d} = c + 3h$ or for $\frac{S - 3dh}{d}$ or $\frac{S}{d} - 3h$
19	$x = 13$ $y = 7$ $z = 5$	3	B2 for correct figures in wrong order or two correct answers or $5 \times 7 \times 13$ seen or B1 for 5, 7 or 13 seen on answer line or $xyz [= 455]$ seen or M1 for attempt to divide 455 by an integer $n > 2$