

CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

MARK SCHEME for the May/June 2013 series

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/21

Paper 2 (Extended), maximum raw mark 40

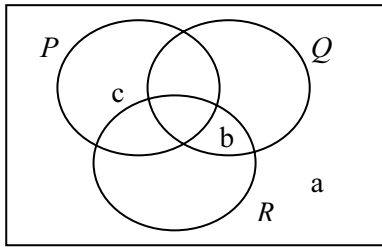
This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, 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 2013 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

Page 2	Mark Scheme	Syllabus	Paper
	IGCSE – May/June 2013	0607	21

1	1.387×10^9	2	B1 for figs 1387 or 12.1×10^8 or 0.177×10^9
2	(a) (1, 3) (b) $-\frac{2}{3}$ o.e. -0.667 or better (c) (i) $y = \frac{3}{2}x + 4$ (ii) $-\frac{8}{3}$ o.e. -2.67 or better	1 2 2FT 1FT	M1 for clear attempt at y increase / x increase M2FT for $y = (-1/\text{their (b)})x + 4$ M1 for $m = -1/\text{their (b)}$ FT from <i>their (c)(i)</i> but not from $y = kx$
3	$x = 3$ $y = -2$	3	M1 for correct equation in 1 variable A1 for each answer
4	(a) 0.39, (0.2), 0.18, 0.15, 0.08 (b) 3600	2 2	B1 for any 3 seen M1 for $0.2 \times 18\,000$ o.e.
5	(a) 115° (b) 65°	2 2FT	B1 for reflex angle $AOD = 230^\circ$ or cyclic quad drawn with angle 65° FT $180 - \text{their (a)}$ B1 for angle $ACD = \text{their (a)}$ ($=x$)
6	U 	3	1 for each correctly placed
7	(a) (i) 3 (ii) -2 (b) 12.5	1 1 2	B1 for $\log 5^2$ or $\log 2p$ or $\log k/2$ seen
8	7.5	4	M1 for $\frac{160}{360} \times \pi \times r^2$ M1 for their sector $= \pi \times 25$ M1 for elimination of π
9	(a) $7\sqrt{2}$ (b) $28 + 10\sqrt{3}$	2 2	B1 for $5\sqrt{2}$ or $2\sqrt{2}$ seen B1 for $25 + 5\sqrt{3} + 5\sqrt{3} + \sqrt{3} \times \sqrt{3}$

Page 3	Mark Scheme	Syllabus	Paper
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10	$\frac{2by + 3y}{a - b}$ o.e.	3	B1 for $bx + 2by$ M1 for correctly isolating x terms M1 for correctly factorising and dividing by bracket
11	$a + b$ $-\frac{1}{2}a - b$ $2b - a$	1 1 1	All answers must be in the form $pa + qb$