

MARK SCHEME for the October/November 2013 series

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/02

Paper 2 (Extended), maximum raw mark 40

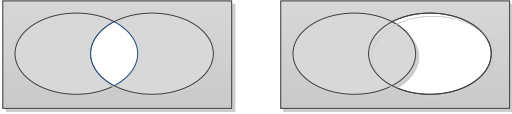
This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began,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

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1	3, -1	1, 1	
2 (a)	4	2	Allow on diagram if not spoiled B1 for $n(A \cap B) = 7$
(b)		1, 1	
3	12.5[0]	3	M2 for $15 \div 1.2$ oe or M1 for recognising $120\% = 15$ oe
4	44	3	M2 for angle BQP or $BQP = 92$ or angle CPQ or $CBQ = 88$ or M1 for angle $DCB = 52$
5 (a)	$6\sqrt{2}$	1	
(b)	4, 3	3	M1 for $\times \frac{\sqrt{2}+1}{\sqrt{2}+1}$ or $\sqrt{2}+2 = (p+q\sqrt{2})(\sqrt{2}-1)$ A1 for 4, A1 for 3
6 (a)	$6y^5$	2	B1 for $6y^n$ or ky^5
(b)	$3p^9$	2	B1 for $3p^n$ or kp^9
7 (a)	4, 90	1,1	
(b)	Translation, $\begin{pmatrix} 0 \\ -4 \end{pmatrix}$	1,1	B1 for translation B1 for $\begin{pmatrix} 0 \\ -4 \end{pmatrix}$
8 (a)	2	1	
(b)	$\frac{9}{16}$	2	M1 for $\frac{16}{9}$ or $\frac{1}{(\frac{4}{3})^2}$ oe or better
9	$\frac{1}{\sqrt{2}}$ or $\frac{\sqrt{2}}{2}$	3	M1 for $(\text{diag of face})^2 = 2$ M1 for correct fraction = tan
10	$6\sqrt{3}$	3	M2 for $\frac{\sqrt{3}}{2} = \frac{x}{12}$ or $x^2 = 12^2 - 6^2$ or B1 for $\cos 30 = \frac{\sqrt{3}}{2}$ or opp side = 6

Page 3	Mark Scheme	Syllabus	Paper
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11	(a)	$-\frac{2}{3}q$	1	
	(b)	$\frac{1}{2}p - \frac{2}{3}q$	1FT	FT $\frac{1}{2}p + \textit{their (a)}$
12	(a)	11	2	B1 for $[g(8)] = 4$
	(b)	$35 - 3x$ oe	2	M1 for $3(12 - x) - 1$
	(c)	$12 - x$ oe	1	