



## **MARK SCHEME for the October/November 2013 series**

# **0607 CAMBRIDGE INTERNATIONAL MATHEMATICS**

**0607/02**

Paper 2 (Extended), maximum raw mark 40

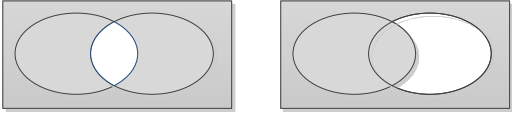
This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began,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

Page 2	Mark Scheme	Syllabus	Paper
	IGCSE – October/November 2013	0607	02

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

<b>Page 3</b>	<b>Mark Scheme</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>IGCSE – October/November 2013</b>	<b>0607</b>	<b>02</b>

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