UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2011 question paper

for the guidance of teachers

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

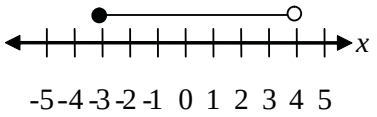
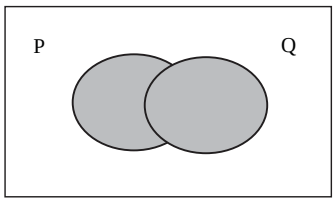
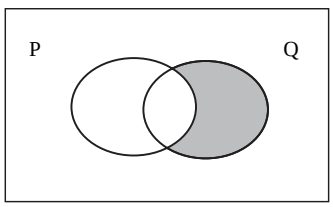
0607/11 Paper 1 (Core), maximum raw mark 40

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 must be read in conjunction with the question papers and the report on the examination.

- Cambridge will not enter into discussions or correspondence in connection with these mark schemes.

Cambridge is publishing the mark schemes for the May/June 2011 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

1	**(a)**	6.1	B1	
	(b)	210	B1	
	(c)	2.3×10^{-3}	B1	**[3]**
2	**(a)**	1, 3, 5, 15	B1	In any order
	(b)	3	B2	If B0 then award B1 for factors of 21 seen **[3]**
3	**(a)**	5	B1	
	(b)	Parallelogram	B1	**[2]**
4	**(a)**	$6x - 10 = x + 10$ $5x = 20$ $x = 4$ www3	M1 M1 A1	Independent
	(b)		B2	B1 for line, B1 for both circles correct **[5]**
5	**(a)**	–1, 1	B1 B1	
	(b)	197	B1	
	(c)	$2n - 3 = 44$ or better Or using $n = 23$ and $n = 24$	M1	E.g. $n = 23.5$
		n not an integer oe	R1	Allow 'not in the sequence' from correct values from $n = 22, 23, 24$ or $n = 23, 24, 25$
		Or List of at least three terms (excluding –1 and 1) Stating 'only odd numbers in sequence' oe	Or M1 R1	**[5]**
6	**(a)**	U 	B1	
	(b)	U 	B1	**[2]**

7	**(a)**	55°	B1	
	(b)	Similar or Enlargements of each other	B1	Ignore extra correct statements e.g. equal angles but not incorrect statements e.g. same
	(c)	7.5	B2	If B0 award B1 for $\frac{5}{15} = \frac{2.5}{y}$ oe seen **[4]**
8	**(a)**	$\frac{1}{2}$ oe	B2	If B0 award M1 for attempt to use $y = mx + c$ or for $y = \frac{1}{2}x + \frac{3}{2}$ seen
	(b)	$\frac{1}{2}$ oe	B1ft	Strict follow through. Allow recovery only with new working. Single number only. **[3]**
9		72°	B2	If B0 award M1 for $\frac{20}{100} \times 360$ soi **[2]**
10	**(a)**	3	B1	
	(b)	$3y(y - 5)$	B2	Allow $3y(1y - 5)$ and/or $3y(y - 5)$ If B0 award B1 for $y(3y - 15)$ or $3(y^2 - 5y)$ SC1 for $3y(y + 5)$ **[3]**
11	**(a)**	4	B1	
	(b)	7	B1	
	(c)	$\frac{8}{15}$ oe isw	B2	If B0 award B1 for $\frac{k}{15}$ or $\frac{8}{k}$ (k > 0) **[4]**
12	**(a)**	$y = x^3 + 3$	B2	If B0 award B1 for $(y =)\ x^3 \pm$ constant $(\neq 0)$
	(b)	$y = (x - 3)^2$	B2	If B0 award B1 for $(y =)\ (x \pm \text{constant})^2$ $(\neq 0)$ **[4]**