CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the May/June 2015 series

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/23   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.

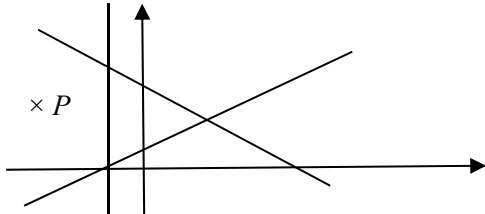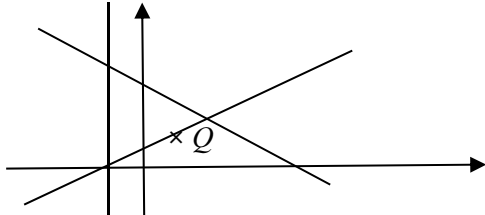Cambridge will not enter into discussions about these mark schemes.
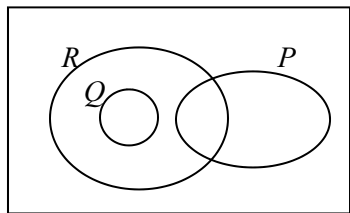
Cambridge is publishing the mark schemes for the May/June 2015 series for most Cambridge IGCSE®, Cambridge International A and AS Level components and some Cambridge O Level components.

Abbreviations

cao   correct answer only
dep   dependent
FT   follow through after error
isw   ignore subsequent working
oe   or equivalent
SC   Special Case
nfww   not from wrong working
soi   seen or implied

1	(a)		$0.000\,605$	1	
	(b)		$7\,000\,000$	1	
2			$\dfrac{0.6 \times 300}{2 + 10}$ 15	M1 A1	At least 3 correct
3	(a)	(i)	$2^2 \times 3$	1	
		(ii)	$2 \times 3 \times 7^3$	1	
	(b)		45	1	
4	(a)		$64 + 6.25\pi$	3	**M1** for $8 \times 5 + 2 \times \dfrac{1}{2} \times 8 \times 3$ oe **M1** for $2 \times \dfrac{1}{2} \times \pi \times 2.5^2$ oe
	(b)		Rotational oe [Order] 2	1 1	
5			$x > 8$	3	Accept $8 < x$ **M1** for $5x + 10 < 8x - 14$ **M1FT** for $10 + 24 < 8x - 5x$ oe or **SC2** for $[x =]\ 8$ or $x < 8$
6	(a)		Bigger sample oe	1	
	(b)	(i)	$\dfrac{24}{150}$ oe	1	
		(ii)	480	1	

7	(a)		(3.2, 2.6)	3	**B2** for one co-ordinate supported by algebra or **M1** for $3x + 4(\frac{1}{2}x + 1) = 20$ or other correct elimination of x or y
	(b)	(i)	P correct	1	
		(ii)	Q correct	1	
8	(a)		90	1	
	(b)		35	1	
	(c)		55	2	**B1** for $ABC = 90 + 35$ or $ADC = 55$
9				3	**B1** for each criterion correct
10	(a)		$(x - 5)(x + 2)$	2	**SC1** for $(x + a)(x + b)$ where $a + b = -3$ or $ab = -10$
	(b)		$[x =] (ay)^3$ oe	2	**M1** for $ay = \sqrt[3]{x}$ or $y^3 = \frac{x}{a^3}$
11	(a)		-2	1	
	(b)	(i)	12	1	
		(ii)	16	1	
12			2, 2, -12	3	**M2** for $a(x + 3)(x - 2)$ or **M1** for $(x + 3)(x - 2)$ If 0 scored, **B1** for $c = -12$