

**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.

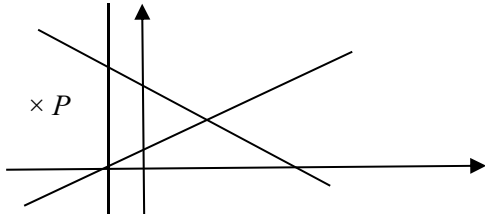
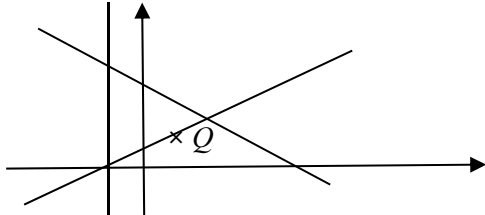
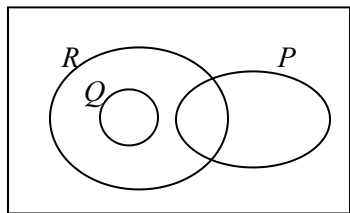
Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the May/June 2015 series for most Cambridge IGCSE<sup>®</sup>, Cambridge International A and AS Level components and some Cambridge O Level components.

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

Page 3	Mark Scheme	Syllabus	Paper
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7	(a)	(3.2, 2.6)	3	<b>B2</b> for one co-ordinate supported by algebra or <b>M1</b> for $3x + 4\left(\frac{1}{2}x + 1\right) = 20$ 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	<b>B1</b> for $ABC = 90 + 35$ or $ADC = 55$
9			3	<b>B1</b> for each criterion correct
10	(a)	$(x - 5)(x + 2)$	2	<b>SC1</b> for $(x + a)(x + b)$ where $a + b = -3$ or $ab = -10$
	(b)	$[x =] (ay)^3$ oe	2	<b>M1</b> 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	<b>M2</b> for $a(x + 3)(x - 2)$ or <b>M1</b> for $(x + 3)(x - 2)$ If 0 scored, <b>B1</b> for $c = -12$