

CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

MARK SCHEME for the May/June 2014 series

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/21

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.

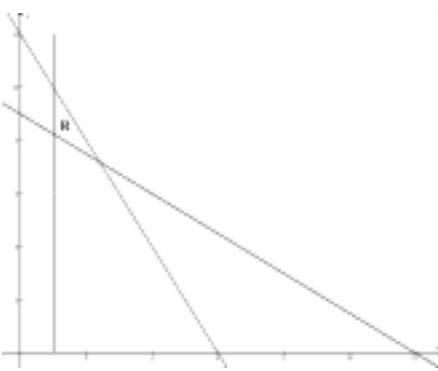
Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the May/June 2014 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

Page 4		Mark Scheme	Syllabus 0607	Papers 21
		IGCSE – May/June 2014	0607	21
1	(a)	$(x + y)(x - y)$	1	
	(b)	25 600	1	
2	(a)	$2\sqrt{3}$	1	
	(b)	30	1	
	(c)	150, -150	2	B1 for 1 correct answer –1 for extra answer(s) in range
3	(a)	8	1	
	(b)	x^2y^2	2	B1 for 1 correct term
4		12.5	3	M2 for $\frac{20}{1.6}$ oe or M1 for $160\% = 20$
5	(a)	310	1	
	(b)	6	2	M1 for $\frac{9.3}{1.55}$
6	(a)	$2\sqrt{3}$	2	B1 for $5\sqrt{3}$ or $3\sqrt{3}$
	(b)	$\frac{7(5 + \sqrt{2})}{23}$	2	Accept other correct alternate numerators, but must see 23. M1 for $\times \frac{(5 + \sqrt{2})}{(5 + \sqrt{2})}$

Page 7	Mark Scheme	Syllabus 0607	Paper 21
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<p>7 (a)</p> <p>(b)</p> <p>(c) (i)</p> <p>(ii)</p>	 <p>$x = 1$ $y = 12 - 2x$ $4y + 3x = 36$</p>	<p>1</p> <p>2</p> <p>2</p> <p>1</p> <p>1</p> <p>1</p>	<p>Answers on the diagram</p> <p>B1 for ruled line with correct gradient, or B1 for correct intercept on either axis</p> <p>B1 for ruled line with correct gradient, or B1 for correct intercept on either axis</p>
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Page 4	Mark Scheme	Syllabus 0607	Papers 21
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8	(a)	$\frac{7}{10}, \frac{6}{9}, \frac{3}{9}, \frac{7}{9}, \frac{2}{9}$ correctly placed	2	B1 3 probs correct
	(b) (i)	$\frac{7}{15}$ oe	2	M1 FT for <i>their</i> $\frac{7}{10} \times \text{their } \frac{6}{9}$
	(ii)	$\frac{14}{15}$ oe	3	<p>M2 for $\left(1 - \frac{1}{15}\right)$, or two of</p> $\left[\left(\frac{7}{10} \times \frac{6}{9}\right) + \left(\frac{7}{10} \times \frac{3}{9}\right) + \left(\frac{3}{10} \times \frac{7}{10}\right)\right]$ seen or M2 for $\left(1 - \frac{3}{10} \times \text{their } \frac{2}{9}\right)$ or two of $\left[\text{their } \frac{7}{10} \times \text{their } \frac{6}{9} + \text{their } \frac{7}{10} \times \text{their } \frac{3}{9} + \left(\frac{3}{10} \times \text{their } \frac{7}{9}\right)\right]$ or M1 for $\frac{3}{10} \times \text{their } \frac{2}{9}$ or 2 of <i>their</i> products correct.
9	(a)	7	1	
	(b)	$\frac{1}{5}$	2	B1 for $\frac{24}{120}$ oe
10		1, -2.5 oe cao	3	<p>M1 Correct multiplication eliminating fractions M1 Correct simplification leading to $4x + 3 = \pm 7$</p> or <p>M1 Correct multiplication eliminating fractions M1 Correct simplification leading to quadratic equation $16x^2 + 24x - 40 = 0$</p> If M0 then SC1 for $x = 1$ only.