

November 2003

INTERNATIONAL GCSE

MARK SCHEME

MAXIMUM MARK: 56

SYLLABUS/COMPONENT: 0580/01, 0581/01

MATHEMATICS

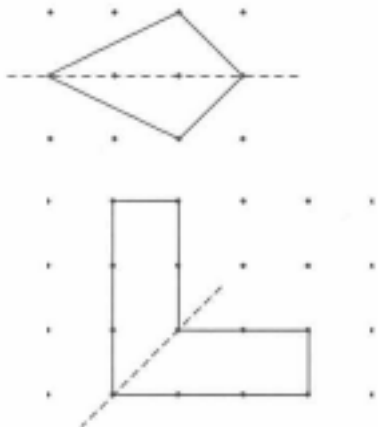
Paper 1 (Core)



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Question Number		Mark Scheme Details			Part Mark
1		400 (grams)	1		1
2		(\$)2.7(0)	2	M1 for $\frac{15}{100} \times 18$ o.e. SC1 for $\frac{85}{100} \times 18 = 15.3$	2
3	(a)	$\frac{2}{5}$	1	Accept equivalent fractions, decimals, percentages (with sign)	2
	(b)	0	1	accept $\frac{0}{5}, \frac{0}{k}$ do not accept, none, not but condone it with 0	
4	(a)	126°	1		3
	(b)	40(%)	2	M1 for $\frac{144}{360} \times 100$ o.e.	
5		1.71(01...)	2	M1 for 5 sin 20° or 5 cos 70° or 1.7	2
6		6 or $\frac{6}{1}$	2	M1 for $\frac{60}{10}, \frac{1}{\frac{1}{6}}, \frac{1}{\frac{1}{60}}$	2
7		144°	3	M2 for $\frac{(2 \times 10 - 4) \times 90}{10}$ or $\frac{(10 - 2) \times 180}{10}$ or $180 - \frac{360}{10}$. After 0, SC1 for answer 36°	3
8		$1250 \leq \text{r.l.} < 1350$	1 + 1	SC1 if reversed	2
9	(a)	$10x^2 - 15xy$	2	B1 for one term correct	4
	(b)	$6x(x + 2)$	2	M1 for $6(x^2 + 2x)$ or $x(6x + 12)$ or $2(3x^2 + 6x)$ or $2x(3x + 6)$ or $3(2x^2 + 4x)$ or $3x(2x + 4)$	
10	(a)	87°	1		3
	(b)	28°	1		
	(c)	$62^\circ \sqrt{\quad}$	1	f.t. is (90 – y)	

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11			1	Lines may be freehand but must go completely through the shape	3
			1		
		Any line through the centre	1		
12		$x = 4, y = 12$	3	M1 for attempting to eliminate one unknown by a correct method A1 for one correct value (x or y)	3
13	(a)	(i) 2.4096...	1	f.t. from (i)	4
		(ii) 2.41 $\checkmark$	1		
	(b)	19.3 or 19.32(16...)	2	B1 for 2.68 seen or implied by 19.2...	
14	(a)	Monday, Tuesday and Saturday	1	All three and no extras	4
	(b)	-2o	3	B1 for -14 seen + M1 for (their -14) $\div 7$	
15	(a)	(i) 0.28	1		4
		(ii) 0.275	1		
		(iii) 0.2857... or 0.286	1		
	(b)	$\frac{275}{1000}$, 28%, $\frac{2}{7}$ or equivalent $\checkmark$	1	f.t. from (a)	
16	(a)	4.58(m)	2	M1 for $\sqrt{5^2 - 2^2}$ s.o.i. e.g. $\sqrt{21}$	4
	(b)	66.4o or 66.3o – 66.45o	2	M1 for $\cos^{-1} \frac{2}{5}$ o.e. incl $\checkmark$	

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17	(a)	3	1	10^8 etc. penalise once only	4
	(b)	-4	1	accept -04	
	(c)	0	1		
	(d)	-2	1		
18	(a)	0.4 or 2.6	2	B1 for one correct SC1 if (0.4,0) (2.6,0)	6
	(b)	(i) 0 (ii) Correct line from $x = -1$ to $x = 4$	1 1	Must be ruled	
	(c)	(0,1), (4,5) ✓	2	B1 for one correct f.t. from (b) (ii)	