

Mark Scheme (Results)

Summer 2013

PLSC Secondary Mathematics (Year 9)
LMA01 Paper 01

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General Marking Guidance

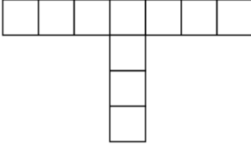
- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.
- The Edexcel Mathematics mark schemes use the following types of marks:
 - **M** marks: method marks are awarded for 'knowing a method and attempting to apply it', unless otherwise indicated.
 - **A** marks: Accuracy marks can only be awarded if the relevant method (M) marks have been earned.
 - **B** marks are unconditional accuracy marks (independent of M marks)

Section A

Question Number	Answer	Mark
1	C	1
2	A	1
3	A	1
4	D	1
5	D	1
6	A	1
7	B	1
8	B	1
9	A	1
10	C	1
11	B	1
12	C	1
13	A	1
14	D	1
15	C	1

Question Number	Answer	Mark
16	C	1
17	D	1
18	B	1
19	C	1
20	D	1
21	A	1
22	B	1
23	C	1
24	C	1
25	B	1
26	D	1
27	A	1
28	C	1
29	B	1
30	C	1

Section B

Question Number	Working	Answer	Mark	Notes
31a	180-115	65	1	B1
31b	180-62-65	53	1	B1 ft from (a)
31c		62	1	B1
32a			1	B1
32b		10,13	1	B1
32c		28	1	B1
32d		3,2	1	B1
33a	8-5 7-5 $2 \times 5 + 5 \times 8$ $3 \times 5 + 5 \times 7$ $8 \times 7 - 3 \times 2$	50	3	M1 for finding one missing side ie. 2 or 3 M1 For one rectangle correctly calculated eg 40, 35 or 56 A1
33b	50×10000	500,000	1	B1 ft for (a) $\times 10000$
34a	$1 \div 3$	$1/3$	2	M1 for rise/run A1 $1/3$ oe
34b		$y=3-2x$	1	B1
34c		-14	2	M1 for $x/2+7=0$ A1
35a		$24f^9$	2	B1 for 24 B1 for f^9
35b		g^4	1	B1
35c	$12x+21-10+6x$	$18x+11$	2	M1 for $12x+21$ or $-10+6x$ A1
35d	$x^2-6x-6x+36$	$x^2-12x+36$	2	M1 for 3 correct terms from an expansion containing 4 terms A1

Question Number	Working	Answer	Mark	Notes
36a		0.72oe	1	B1
36b		360	1	B1 ft from their (a) for $0 < a < 1$
37a		Negative	1	B1
37b		Straight line within tolerances of (1.5, 6000) to (1.5, 8000) and (5, 2000) to (5,3000) inclusive	1	B1
37c		Value from their ruled line	1	B1 ft from their straight line of best fit
38	$280 \div 7$ 40×2	80	2	M1 for $280 \div 7$, 200 or 80:200 A1
39a		4 9 0 1 2 4 4 6 1 5 7 0 Key: eg. $11 \square 4 = 11.4$	3	B2 all correct (B1 one incorrect/omission) or B1 for unordered stem & leaf B1 correct key
39b		12.4	1	B1 ft from their ordered diagram
40a	0.7^3	0.343	1	B1
40b	$0.7^2 \times 0.3 \times 3$	0.441	2	M1 $0.7 \times 0.7 \times 0.3$ or 0.147 A1
41	2, 5, 7 2, 7, 7 2, 2, 2, 2, 7	14	2	M1 for one correct prime factorisation or for all factors of one number listed A1
42	$3x - 15 = 18 - 2x$ $5x = 33$	6.6 o.e	2	M1 for expanding brackets and one correct step to move towards answer A1
43		2, 7, 14	1	B1
44	$4.2 \times 10^{13} \div 3 \times 10^8$ 140000	39 or 38.9 or 38.888...	2	M1 attempt at $s = d/t$ (can be implied by sight of 1.4×10^n) A1
45a	$862.40 \div 0.88$	980	2	M1 for sight of 0.88 A1
45b	800×1.03^4	900.40, 900.41 or 900.42	2	M1 for complete correct compound interest method A1
46	$x^2 = 11$	$\sqrt{11}$ and $-\sqrt{11}$ or answers that round to ± 3.32	2	M1 for $x^2 = 11$ or better A1

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