Mark Scheme (Final)

Summer 2015

PLSC Maths Year 9 (LMA/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.

- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.

- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Section A

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

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

Section B

Question number	Working	Answer	Mark	Notes
31a		144	1	B1
31b	47/100 or 0.47 or 47% 35/100 or 0.35 or 35% 45/100 or 0.45 or 45% 40/100 or 0.4(0) or 40%	7/20, 2/5, 0.45, 47%	2	M1 for 3 of the 4 values in correct, comparable form A1
31c (i)		6/40 oe	1	B1
31c (ii)		25/60 – 24/60	2	M1 for showing a correct method to convert both fractions to a common denominator A1 for correctly completing the process
32a	15, 17, 17, 28, **37**, 55, 84, 92, 112	37	1	B1
32b	5 × 17 = 85 15 × 9 = 135 25 × 11 = 275 35 × 3 = 105 85+135+275+105=600 600 ÷ 40 = 15	15	3	M1 for 'midpoint' × frequency (condone incorrect midpoint as long as the value is taken from a consistent point within the class intervals) M1 dep for their Σfx ÷ their Σf A1
33a		Triangle with points at (2, 3) (1, -2) and (4, -1)	1	B1
33b	(5 × 5) ÷ 2	12.5	1	B1
33c	(180 – 90) ÷ 2	45	1	B1
33d	110+90+100+105=405 540 – 405 = 135	135	2	M1 for complete correct method or for 540 seen A1
34a (i) **34a (ii)**		-8 and 1 in table	2	B1 B1 for correct line drawn OR for correctly plotting AND joining all points from the table
34b		3n + 1	2	M1 for an answer in the form 3n + k oe A1 for 3n + 1 oe
35a		Any correct net of a cube	1	B1
35b	(3 × 3) × 6	54	1	B1
35c	eg. (3 × 3 × 3) ÷ 2 27 ÷ 2	$\frac{27}{2}$ oe	2	M1 for complete correct method A1

Question number	Working	Answer	Mark	Notes
36a		8p – 20	1	B1
36b	-30q = 102 + 12 oe or 10q = -34 – 4 oe	q = -3.8	2	M1 for correct expansion of brackets and collection of terms A1
36c	7r ≥ 56	r ≥ 8	2	M1 for complete correct method OR 8 seen with no evidence of incorrect working A1
36d		(x + 7) (x – 7)	1	B1
37a	<table><tr><td>2</td><td>0, 5</td></tr><tr><td>3</td><td>1, 3, 5, 7</td></tr><tr><td>4</td><td>3, 3, 7, 9</td></tr></table>	Correct diagram Appropriate key	3	B2 (B1 for 1 error OR for fully correct but unordered diagram) B1
37b		35 – 41 inclusive	1	B1
38a	5 + 3 + 2 = 10 330 ÷ 10 = 33 33 × 2 = 66	66	2	M1 for 330 ÷ '10' or for 165 : 99 : 66 A1
38b	eg. (330 ÷ 100) × 38	125.4	2	M1 for complete correct method A1
39a	M/3 = t + 4p or M – 12p = 3t	t = (M/3) – 4p or t = (M – 12p) / 3	2	M1 for dividing each side by 3 or for M – 12p = 3t or better A1
39b	eg. 10x + 6y = 76 2x = 11	x = 5.5 y = 3.5	3	M1 for correct method to eliminate either variable A1 for finding x A1 for finding y
40a	$10^2 – 7^2 = x^2$ x = 7.1(4142842…)	√51	2	M1 A1
40b	tan 25 = y/9	4.19 – 4.2 inclusive	3	M1 for selection of the correct trigonometric ratio M1 for (y =) 9 tan 25 A1
41		30	1	B1
42		<table><tr><td rowspan="2">0.3</td><td>0.3</td></tr><tr><td>**0.7**</td></tr><tr><td rowspan="2">**0.7**</td><td>**0.3**</td></tr><tr><td>**0.7**</td></tr></table>	2	M1 for 0.7 seen in at least one correct answer box A1