Pearson

Mark Scheme (Results)

Summer 2017

Pearson Edexcel In Lower Secondary Mathematics Year 9 (LMA01)

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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	C	1
4	B	1
5	C	1
6	D	1
7	A	1
8	D	1
9	B	1
10	A	1
11	A	1
12	C	1
13	B	1
14	C	1
15	B	1
16	A	1
17	D	1
18	D	1
19	C	1
20	C	1
21	B	1
22	C	1
23	A	1
24	C	1
25	B	1
26	D	1
27	D	1
28	C	1
29	C	1
30	A	1

Section B

Question number	Working	Answer	Mark	Notes
31a		32, 37	1	B1
31b		5n + 2	2	M1for 5n + c oe A1
31c	(5 × 50) + 2	252	1	B1 ft from their an + b ($a \neq 0$ and $b \neq 0$)
32a	16, 32, **48**, … 24, **48**, …	48	1	B1
32b	1, 2, 4, **8**, 16 1, 2, 3, 4, 6, **8**, 12, 24	8	1	B1
33a	45 + 65 = 110 180 – 110	70º	2	M1 (x =) 180 – (45 + 65) oe A1
33b	90+90+110+110 = 400 540 – 400	140º	2	M1 (x =) 540 – (90 + 90 + 110 + 110) A1
34a		24f – 12	1	B1
34b		3y (2y + 11)	1	B1
34c	4k = 40 + 9 4k = 49 k = 49 ÷ 4	k = 12.25 or 49/4 oe	2	M1 for 4k = 40 + 9 or better A1
35		3 | 1 5 4 | 3 5 5 9 5 | 0 6 6 | 1 3 5 5 + a correct key	3	B2 for a fully correct, ordered stem-and-leaf diagram (otherwise B1 for one error or omission OR for a fully correct unordered diagram) B1 for a correct key
36	8 + 4 + 3 = 15 300 ÷ 15 = 20 8×20 : 4×20 : 3×20	Renee = $80	2	M1 for 300 ÷ (8 + 4 + 3) A1
37a	12 ÷ 40 × 100	30	1	B1
37b	60 × 0.85	51	1	B1
37c	x = 0.141414141… 100x = 14.1414141… 99x = 14	14/99	2	M1 for 100x = 14.1414141… A1
38a(i)	π × 12	[37.6, 37.8] or 12 π	1	B1
38a(ii)	π × 6 × 6	[113, 113.2] or 36 π	1	B1
38b	[(π × 12) ÷ 2] + (3 ×12) =54.8(495559...)	[54.8, 54.9] or 6π + 36	2	M1 ft for their "a(i) ÷ 2" OR for [18.8, 18.9] OR 6π oe seen A1 ft

Question number	Working	Answer	Mark	Notes
39		Positive (correlation)	1	B1
40a	$\sqrt{(14^2 + 6^2)}$ $\sqrt{(196 + 36)}$ $\sqrt{232} = 2\sqrt{58}$	15.2… oe	2	M1 for $\sqrt{(14^2 + 6^2)}$ or better A1
40b	tan 60 = h / 5 h = 5 tan 60 h = 5 × 1.7(3205….)	[8.65, 8.7]	2	M1 for tan 60 = h / 5 or better A1
41a	C-3 = 4t	$t = \frac{C-3}{4}$ oe	1	B1
41b	4 x < 18 – 3 x < 15 ÷ 4	x < 3.75 OR x < 15/4	2	M1 for 4 x < 18 – 3 or better A1 SC:B1 for answer of 3.75 oe
41c	$\frac{(7 \times 3a)}{(5 \times 7)} + \frac{(5 \times 2a)}{(5 \times 7)}$ $= \frac{21a}{35} + \frac{10a}{35}$	$\frac{31a}{35}$	2	M1 for a suitable common denominator (35, 70, …) AND at least one correct numerator A1
42		Graph of y = 2x - 1	2	B1 for straight line graph with gradient of 2 B1 for straight line graph with intercept of -1
43	110 × 4 = 440 130 × 9 = 1170 150 × 11= 1650 170 × 6 = 1020 4280 ÷ 30	142.6666… correctly rounded or truncated	3	M1 for intention to multiply midpoint by frequency (can be implied by at least three correct products out of four) M1 ∑ f 'x' / ∑ f A1
44a	$\frac{g^{10}}{g^6}$	g^4	2	M1 a correct simplification A1
44b		1	1	B1
44c	$(3.1 \times 4.2) \times (10^5 \times 10^2)$	1.302×10^8	2	M1 for $(3.1 \times 4.2) \times (10^5 \times 10^2)$ OR 310 000 × 420 A1 SC: B1 for a correct answer not in standard form if M0A0 otherwise
45a		475	1	B1
45b		0.95 0.05 0.05 0.95 0.05	2	B2 for 5 correct entries (B1 for at least 3 correct)

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