Mark Scheme

Q1.

Question number	Working	Answer	Additional Guidance	Mark
a	m + 2m + m + 12 = 96 4m + 12 = 96 4m = 84 m = 21	42	M1 for forming a correct equation M1 for solving their linear equation OR for finding the cost of her mother's dinner A1	3

(**QU25 LMA11/01, Oct 2022**)

Q2.

Question number	Answer	Mark
	A – Subtracts 140 then divides by 4 B – CORRECT ANSWER C – Subtracts 140 then multiplies by 4 D – Adds 140 then multiplies by 4	1

(**QU07 LMA11/01, Oct 2022**)

Q3.

Question number	Working	Answer	Additional Guidance	Mark
a	$10x + 10x^2 - 8x$	$10x^2 + 2x$	M1 for $10x^2 - 8x$ A1	2

Question number	Working	Answer	Additional Guidance	Mark
b	$18y - 21 < 24$ $18y < 45$ $y < 45 \div 18$	$y < 2.5$	M1 for correctly isolating the term in y OR for an answer containing 2.5 A1	2

Question number	Working	Answer	Additional Guidance	Mark
c	$9w - 4 = 19 + 13$ $5w = 32$ $w = 32 \div 5$	6.4	M1 for correctly isolating terms in w A1 accept 32/5	2

(**Q21 LMA11/01, June 2024**)

Q4.

Question number	Answer	Mark
	A – $(\sqrt{400}) \div 8$ B – $400 \div 8^2$ C – CORRECT ANSWER D – $\sqrt{(400 \times 8)}$	1

(**Q10 LMA11/01, Oct 2024**)

Q5.

Question number	Answer	Mark
	The only correct answer is A: –0.9 ***B*** *is not correct because it is* $t^2 - \sqrt{tu+3s}$ *divided correctly* ***C*** *is not correct because it is* $t^2 - \sqrt{tu+3s}$ *but divided by 20 (not –20)* ***D*** *is not correct because it is* $t^2 - \sqrt{(tu+3s)}$ *but divided by 20 (not –20)*	1

(**Q12 LMA11/01, June 2024**)

Q6.

Question number	Answer	Mark
	A – CORRECT ANSWER B – Multiplies the 8 over the bracket but only by $3y$ C – Adds 8 over the bracket (but only to $3y$) instead of multiplying D – Adds 8 over the bracket (to both terms) instead of multiplying	1

(**Q05 LMA11/01, Oct 2024**)

Q7.

Question number	Answer	Mark
	The only correct answer is B: 15p + 14q ***A*** *is not correct because it is = 23p – 8p + 9q – 5q* ***C*** *is not correct because it is 23p + 8p + 9q + 5q* ***D*** *is not correct because it is 23p + 8p + 9q – 5q*	1

(**Q03 LMA11/01, June 2024**)

Q8.

Question number	Working	Answer	Additional Guidance	Mark
	$x + x + 5 + 2x = 49$ $4x + 5 = 49$ $4x = 44$ $x = 44 \div 4$	11	M1 for forming a correct linear equation A1	2

(**Q25 LMA11/01, June 2024**)

Q9.

Question number	Working	Answer	Additional Guidance	Mark
a	$h + h + 20 + 2h = 100$ **or** $4h + 20 = 100$ $4h = 100 - 20$ **or** $h = 80 \div 4$	20	M1 for forming a correct expression (accept any letter for h) M1ft for correctly isolating term in h A1 cao	3

(**Q28 LMA11/01, Oct 2024**)

Q10.

Question number	Answer	Mark
	A – expands bracket but subtracts instead of adding B – doesn't expand bracket and subtracts instead of adding C – doesn't expand bracket D – CORRECT ANSWER	1

(**QU13 LMA11/01, June 2023**)

Q11.

Question number	Answer	Marks
	A $x^2 + 4x - 12$	**(1)**

(**QU14 LMA11/01, SAM 0**)

Q12.

Question number	Working	Answer	Additional guidance	Mark
c	$9y - 11 < 5y + 10$ $9y - 5y < 10 + 11$ $4y < 21$	$y < 5.25$	M1 for 5.25 or correctly isolating letter and number terms A1	**(2)**

(**QU22 LMA11/01, Oct 2021**)

Q13.

Question number	Working	Answer	Additional guidance	Mark
c	$p^2 = \frac{7q}{5}$ $5p^2 = 7q$	$q = \frac{5p^2}{7}$	M1 for correctly squaring both sides M1 (dep) for multiplying both sides by 5 A1	**(3)**

Question number	Working	Answer	Additional guidance	Mark
d	$7x + 1 = 5(2x + 5)$ $7x + 1 = 10x + 25$ $-25 + 1 = 10x - 7x$ $-24 = 3x$	$x = -8$	M1 for multiplying both sides by 5 correctly M1 (dep) for correctly isolating letter and number terms on each side A1	**(3)**

(**QU19 LMA11/01, June 2021**)

Q14.

Question number	Answer	Mark
	C - 46	(1)

(**QU14 LMA11/01, Oct 2020**)

Q15.

Question number	Answer	Mark
	B - 300	(1)

(**QU10 LMA11/01, Oct 2021**)

Q16.

Question number	Answer	Mark
	A – CORRECT ANSWER B – 3^2 - $\sqrt{100}$ + 10 C – 7^2 - $\sqrt{100}$ + -10 D – 7^2 - $\sqrt{100}$ + 10	1

(**QU11 LMA11/01, Oct 2023**)

Q17.

Question number	Working	Answer	Additional guidance	Mark
	$21 = 2x + 1$ $20 = 2x$	10	M1 for 21=2x+1 oe A1	(2)

(**QU16 LMA11/01, June 2019**)

Q18.

Question number	Answer	Mark
	A – substitutes 60 into both p and n then adds the 15 to find 'T' B – CORRECT ANSWER C – substitutes 60 into p then solves to find 'n' D – substitutes 60 into n then solves but without using the 15	(1)

(**QU12 LMA11/01, June 2022**)

Q19.

Question number	Answer	Mark
	A is not the correct answer because it is negative and the wrong sign B is not the correct answer because it is negative C is not the correct answer because it is the wrong sign **The only correct answer is D - $x > 2$**	**(1)**

(**QU15 LMA11/01, June 2021**)

Q20.

Question number	Answer	Mark
	A is not the correct answer because they have subtracted $(3b+c)^2$ B is not the correct answer because square rooted and subtracted **The only correct answer is C - 71** D is not the correct answer because substituted 4 not -4	**(1)**

(**QU12 LMA11/01, June 2021**)

Q21.

Question number	Working	Answer	Additional guidance	Mark
	$t^2 = \frac{k}{5c}$ $5ct^2 = k$	$k = 5ct^2$	M1 for squaring both sides as the first step A1	**(2)**

(**QU28 LMA11/01, Oct 2021**)

Q22.

Question number	Answer	Mark
	D - $\frac{(3m)^2}{7}$	**(1)**

(**QU13 LMA11/01, Oct 2020**)

Q23.

Question number	Answer	Mark
	A – 8k + 2k + 4– 3 + 6 B – 8k + 2k – 12 + 6 C – 8k + 8k – 3 + 6 D – CORRECT ANSWER	1

(**QU03 LMA11/01, Oct 2023**)

Q24.

Question number	Working	Answer	Additional Guidance	Mark
a		x^{-2}	M1 for any correct first step to simplify using index laws A1 accept $1 / x^2$	2

Question number	Working	Answer	Additional Guidance	Mark
b		$t = 8r^2 / 7$	M1 for squaring as a first step M1 (dep) for multiplying by 8 as a second step A1	3

Question number	Working	Answer	Additional Guidance	Mark
c	$7(k-4) = 15-k$ $7k-28 = 15-k$ $7k+k = 15+28$ $8k = 43$ $k = 43/8$	5.375 oe	M1 for correct expansion of brackets M1 (dep) for complete method to isolate terms in k A1 accept an answer of 43/8 or 5 3/8	3

(**QU27 LMA11/01, Oct 2023**)

Q25.

Question number	Answer	Mark
	A – Wrong inequality B – CORRECT ANSWER C – Wrong inequality and wrong sign D – Wrong sign	1

(**QU14 LMA11/01, Oct 2023**)

Q26.

Question number	Answer	Mark
	A – CORRECT ANSWER B – -125 + 8 (wrong sign on second term) C – 125 – 8 (wrong sign on first term) D – 125 + 8 (wrong sign on both terms)	1

(**QU14 LMA11/01, June 2023**)

Q27.

Question number	Working	Answer	Notes	Marks
	$15P = 171 - 96$ $15P = 75$ $P = \frac{75}{15}$	5	M1 $96 + 15P = 171$ or better A1	**(2)**

(**QU20 LMA11/01, SAM 0**)

Q28.

Question number	Working	Answer	Notes	Marks
(a)	$3(5x - 8) = 7(3x + 2)$ $15x - 24 = 21x + 14$ $-24 - 14 = 21x - 15x$ oe $-38 = 6x$ $x = \frac{-38}{6}$ $x = \frac{-19}{3}$	$-6\frac{1}{3}$ oe	M1 $15x - 24$ OR $21x + 14$ M1 correctly isolate their terms in x A1	**(3)**

Question number	Working	Answer	Notes	Marks
(b)	$46 - 35 \geqslant -5x$ $11 \geqslant -5x$ $x \leqslant -\frac{11}{5}$	$x \leqslant -2.2$ oe	M1 for ± 2.2 oe A1	(2)

Question number	Working	Answer	Notes	Marks
(c)		$(x + 8)(x - 8)$ or $(x - 8)(x + 8)$	B1	(1)

Question number	Working	Answer	Notes	Marks
(d)		1 and 3	M1 $(x \pm 1)(x \pm 3)$ M1 $(x - 1)(x - 3)$ OR $(x - 3)(x - 1)$ A1	(3)

(**QU27 LMA11/01, SAM 0**)

Q29.

Question number	Answer	Mark
	A – $-1 < x < 4$ B – $-1 < x \leq 4$ C – CORRECT ANSWER D – $-1 \leq x \leq 4$	(1)

(**QU14 LMA11/01, June 2022**)

Q30.

Question number	Answer	Mark
	A – First inequality symbol incorrect B – Inequality symbols reversed C – Second inequality symbol incorrect D – CORRECT ANSWER	1

(**QU15 LMA11/01, Oct 2022**)

Q31.

Question number	Working	Answer	Notes	Marks
(a)	$8b + 12 - 5b + 35$ $3b + 47$	$3b + 47$	B1 $3b$ B1 $+ 47$	(2)

Question number	Working	Answer	Notes	Marks
(b)	$\frac{y}{4} = x^2$ Accept $x = \sqrt{\frac{y}{4}}$	$x = (\pm)\sqrt{\frac{y}{4}}$	M1 for any one correct step shown A1 oe	(2)

(**QU24 LMA11/01, SAM 0**)