Question			Answer	Marks	Part Marks and Guidance	
1			$a = 7$ $b = -2$ $c = 14$	3	Or B2 for 2 correct Or B1 for 1 correct	
2	**(a)**		(1, 4.5)	2	**B1** for each coordinate	
	(b)	**(i)**	58	2	**M1** for $t^2 = 9$ or $6t^2 = 54$	
		(ii)	$[t =][\pm]\sqrt{\frac{d-4}{6}}$ oe as final answer	3	nfww **M1** for a correct first step: $d - 4 = 6t^2$ or $d/6 = t^2 + 4/6$ oe **M1** for correctly making t^2 the subject, FT their first step **M1** for finding the square root of their expression for t^2	Square root symbol must extend below fraction line
	(c)		3 and 32	2	**B1** each	
	(d)	**(i)**	2.5 oe	1	accept 5/2	
		(ii)	$-3 - 2t$	2	Accept $-2t - 3$ **M1** for $5 - 2(t + 4)$	

3	**(a)**		8	2	**M1** for 12 or for evidence of ÷ 6 then − 4	
	(b)	**(i)**	$6n + 4$	1	Need not be simplified	eg **1** for $n6 + 4$ or $6 \times n + 4$ **0** for other letters used but condone N used
		(ii)	7	3	nfww **SC2** for embedded answer $6 \times 7 + 4 = 7 + 39$ OR **M1** for collecting n's **M1** for collecting numbers FT *their* $an + b = n + 39$, $a \neq 1$ or 0 and $b \neq 39$ or 0	Allow 7 from trials if correct answer found; otherwise **M0** eg **M2** for $5n = 35$ after correct equation

4	**(a)**		$a = 11$ $b = -21$	1 1	**0** for 11 if it comes from eg $11x^2$ Allow **1** for -21 independent of errors in coping with the x's If **0** for question, allow **SC1** for LHS = $11x - 21$ soi	
	(b)		Any integer pair of values satisfying the relationship $4c + d = 23$, except $c = 11$, $d = -21$	2	nfww **M1** for $4c + d = 23$ soi or LHS = 23 or for non-integer pair satisfying $4c + d = 23$ eg $c = 5.5$, $d = 1$	eg **2** for c | 1 | 5 | 7 | d | 19 | 3 | -5 | eg **M1** for $cx + d = 23$

5			Eq | Id | Fo | Ex | | | ✓ | | ✓ | | | ✓ | | | | | | | ✓ | | | ✓	4	**B3** for 4 correct Or **B2** for 3 correct Or **B1** for 2 correct	If > 1 tick in a row then that counts as an incorrect entry

6	**(a)**		$3.32x = 34 – (1.24 \times 6)$ oe 8	M2 B2	*Final 2 marks available without algebra* **M1** for $3.32x + (1.24 \times 6) = 34$ oe **B1** for $[x =] (34 – 1.24 \times 6) \div 3.32$ oe soi	
	(b)		£5.09 or £5.10 or £5.11	3	**M2** for (4.56 or 3.32 or 1.24) × 1.12 oe Or **M1** for (4.56 or 3.32 or 1.24) × 0.12 oe	Soi by 5.1072 or 3.7184 or 1.3888 rot Soi by 0.5472 or 0.3984 or 0.1488 rot

7	**(a)**	$\frac{10}{8}$ or 1.25 oe as final answer	**3**	**M2** for $8x = 10$, Or **M1** for x terms or number terms collected correctly and **M1** for their final answer correct FT *their* $ax = b$, with a and $b \neq 1$ or 0	
	(b)	$\frac{5}{2}$ or $\frac{35}{14}$ or 2.5 oe as final answer	**3**	**M2** for $35 = 14x$ or $5 = 2x$ oe Or **M1** for $35 - 14x$ soi If M0, allow **SC1** for their final answer correct FT *their* $ax - b = 0$ or *their* $ax = b$, with a and $b \neq 1$ or 0	Eg **SC1** for 17.5 oe following $35 - 2x = 0$

8	**(a)**	(i) $\frac{8}{5}$ or 1.6 oe	**3**	**M2** for $5x = 8$ Or **M1** for one side of equation correct AND **M1** for final answer FT from *their* $ax = b$, provided $a \neq \pm 1$ Allow **B3** for correct answer given embedded as final answer	Allow **M1** for e.g. $3x = 8 - 2x$ E.g. $3 \times 1.6 + 7 = 15 - 2 \times 1.6$
		(ii)	**1**		**0** for embedded answer
		(iii) ± 5	**3**	**B2** for one solution Or **M1** for 25 or 5^2 seen or for $\sqrt{\frac{75}{3}}$ Or **B1** each for embedded solutions e.g. $3 \times 5^2 = 75$ as final answer	
	(b)	$8x^2 - 28x$ as final answer	**2**	**M1** for one term correct or for correct answer seen then spoilt by further 'simplification' or for $4(2x^2 - 7x)$	Condone $8x^2 + -28x$ for 2 marks **M0** for $x(8x - 28)$
	(c)	$2(3 + 4x)$	**1**		Condone missing final bracket
	(d)	$x - bx = 2a - 3$ oe $x(1 - b) = 2a - 3$ oe $[x =] \frac{2a-3}{1-b}$ or $\frac{3-2a}{b-1}$	**M2** **M1** **M1**	**M1** for one correct step in collection of terms For factorising, FT For division, FT *their* factored form; condone written with a division symbol (even without brackets) rather than as a fraction for final step	E.g. **M1** for $x = 2a - 3 + bx$ or for terms in x or $x^2 = 2a - 3$ or, at worst, e.g. $-b = 2a - 3$ For last two marks, no FT from too simple 'formulae' after their errors Mark best attempt, not a mixture