1	$w = \sqrt[3]{y^2}$	B1	
	Additional Guidance		

2	$y\sqrt{x+1} = 1$ or $\sqrt{x+1} = \frac{1}{y}$ or $y^2 = \frac{1}{x+1}$	M1	
	$y^2(x+1) = 1$ or $y^2x + y^2 = 1$ or $y^2x = 1 - y^2$ or $x + 1 = \frac{1}{y^2}$ or $\frac{1}{y^2} - 1$ or $\frac{1-y^2}{y^2}$	M1dep	
	$x = \frac{1}{y^2} - 1$ or $x = \frac{1-y^2}{y^2}$	A1	oe in the form $x =$
	Additional Guidance		
	Correct answer in working repeated on answer line without $x =$ eg $x = \frac{1}{y^2} - 1$ seen in working with answer $\frac{1}{y^2} - 1$		M1M1A1
	Allow $\left(\frac{1}{y}\right)^2$ for $\frac{1}{y^2}$ throughout		
	Allow 1^2 for 1 throughout		

Q	Answer	Mark	Comment
3	**Alternative method 1**		
	$xy = 5x + 9$	M1	
	$xy - 5x = 9$ or $5x - xy = -9$	M1dep	oe collection of terms
	$x(y-5) = 9$ or $x(5-y) = -9$ or $\frac{9}{y-5}$ or $\frac{-9}{5-y}$	M1dep	
	$x = \frac{9}{y-5}$ or $x = \frac{-9}{5-y}$	A1	
	Alternative method 2		
	$y = 5 + \frac{9}{x}$ or $y - \frac{9}{x} = 5$	M1	allow $\frac{5x}{x}$ for 5
	$y - 5 = \frac{9}{x}$ or $5 - y = -\frac{9}{x}$	M1dep	
	$\frac{1}{y-5} = \frac{x}{9}$ or $x(y-5) = 9$ or $x(5-y) = -9$ or $\frac{1}{5-y} = -\frac{x}{9}$ or $\frac{9}{y-5}$ or $\frac{-9}{5-y}$	M1dep	
	$x = \frac{9}{y-5}$ or $x = \frac{-9}{5-y}$	A1	

3 cont	Additional Guidance	
	$\frac{9}{y-5}$ on answer line with $x = \frac{9}{y-5}$ in working	M1M1M1A1
	Allow the equation with x on the right, eg $\frac{9}{y-5} = x$	M1M1M1A1
	Allow appropriate × or ÷ signs throughout	

Q	Answer	Mark	Comments
4	$xy = x + 8$ or $y = 1 + \frac{8}{x}$	M1	oe equation with fraction eliminated or oe equation with single fraction split into two terms eg $y \times x = x + 8$ or $y = \frac{x}{x} + \frac{8}{x}$
	$xy - x = 8$ or $x(y - 1) = 8$	M1dep	oe equation with x terms collected eg $x - xy = -8$
	$x = \frac{8}{y-1}$ or $x = \frac{-8}{1-y}$	A1	oe equation with x the subject eg $-\frac{8}{1-y} = x$
	Additional Guidance		
	Up to M2 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts		
	Correct answer in working with answer repeated on answer line without $x =$ eg $x = \frac{8}{y-1}$ seen in working with answer $\frac{8}{y-1}$		M1M1A1
	Do not allow incorrect simplification after correct answer seen eg $x = \frac{8}{y-1}$ $x = \frac{8}{y} - 8$		M2A0
	$xy - x - 8 = 0$ with no further correct working		M1M0

Q	Answer	Mark	Comment
5	$\frac{c}{b^4}$	B1	

Q	Answer	Mark	Comment
6	$8m - 4$	B1	
	$9m$ + their $8m - pm = p^2$ + their 4 or $17m - pm = p^2$ + their 4	M1	collects terms after expansion
	$m(9 + \text{their } 8 - p) = p^2 + \text{their } 4$ or $m(17 - p) = p^2 + \text{their } 4$ or $\frac{p^2 + 4}{17 - p}$	M1dep	factorises
	$m = \frac{p^2 + 4}{17 - p}$	A1	oe in the form $m =$ eg $m = \frac{-p^2 - 4}{p - 17}$
	Additional Guidance		
	$m = \frac{p^2 + 4}{17 - p}$ in working, with $\frac{p^2 + 4}{17 - p}$ on answer line		B1M1M1A1
	$8m - 1$ $17m - pm = p^2 + 1$ $m(17 - p) = p^2 + 1$ $m = \frac{p^2 + 1}{17 - p}$		B0 M1 M1 A0

Q	Answer	Mark	Comments
7	**Alternative method 1: multiplies by x first**		
	$xy = 3x + 7$	M1	allow yx for xy throughout
	$xy - 3x = 7$ or $3x - xy = -7$	M1dep	oe collection of terms
	$x(y-3) = 7$ or $x(3-y) = -7$ or $\frac{7}{y-3}$ or $\frac{-7}{3-y}$	M1dep	
	$x = \frac{7}{y-3}$ or $x = \frac{-7}{3-y}$	A1	oe in the form $x =$ may have brackets on the denominator
	Alternative method 2: splits up the fraction first		
	$y = 3 + \frac{7}{x}$ or $y - \frac{7}{x} = 3$	M1	allow $\frac{3x}{x}$ for 3
	$y - 3 = \frac{7}{x}$ or $3 - y = -\frac{7}{x}$	M1dep	
	$\frac{1}{y-3} = \frac{x}{7}$ or $x(y-3) = 7$ or $x(3-y) = -7$ or $\frac{7}{y-3}$ or $\frac{-7}{3-y}$	M1dep	
	$x = \frac{7}{y-3}$ or $x = \frac{-7}{3-y}$	A1	oe in the form $x =$ may have brackets on the denominator

	Additional Guidance	
7 cont	Up to M2 may be awarded for correct work with no answer or incorrect answer if this is seen amongst multiple attempts	
	$\frac{7}{y-3}$ on answer line with $x = \frac{7}{y-3}$ in working	M3A1
	Allow the equation with x on the right, eg $\frac{7}{y-3} = x$	M3A1
	Condone $x = 7/y - 3$ if not from incorrect working	M3A1
	Allow appropriate × or ÷ signs throughout for up to M3	