Question Number	Scheme	Notes	Marks
5	$(x=)-8$	This cv stated or used	B1
	For cv's $3, -\frac{19}{3}$ **OR** For cv's $3, -13$		
	Examples: $x^2-9=(x+8)(6-2x)\Rightarrow x=...$ **or** $(x^2-9)(x+8)=(x+8)^2(6-2x)\Rightarrow x=...$ **or** $\frac{x^2-9}{(x+8)}-(6-2x)=0\Rightarrow x=...>$ NB leads to $3x^2+10x-57=0$	Examples: $x^2-9=-(x+8)(6-2x)\Rightarrow x=...$ **or** $-(x^2-9)(x+8)=(x+8)^2(6-2x)\Rightarrow x=...$ **or** $\frac{x^2-9}{-(x+8)}-(6-2x)=0\Rightarrow x=...>$ NB leads to $x^2+10x-39=0$	M1
	For cv's $3, -\frac{19}{3}$ **AND** For cv's $3, -13$		
	Examples: $x^2-9=(x+8)(6-2x)\Rightarrow x=...$ **or** $(x^2-9)(x+8)=(x+8)^2(6-2x)\Rightarrow x=...$ **or** $\frac{x^2-9}{(x+8)}-(6-2x)=0\Rightarrow x=...>$ NB leads to $3x^2+10x-57=0$	Examples: $x^2-9=-(x+8)(6-2x)\Rightarrow x=...$ **or** $-(x^2-9)(x+8)=(x+8)^2(6-2x)\Rightarrow x=...$ **or** $\frac{x^2-9}{-(x+8)}-(6-2x)=0\Rightarrow x=...>$ NB leads to $x^2+10x-39=0$	M1
	Any two of: $x=-13, -\frac{19}{3}, 3$	For any two of these cv's. May be seen embedded in their inequalities. **Depends on at least one previous M mark.**	A1
	$-13<x<-8,\ -8<x<-\frac{19}{3},\ x>3$ **A1**: Any 2 of these inequalities. Note that $-13<x<-\frac{19}{3},\ x\neq-8$ would count as 2 correct inequalities. Also condone $-13<x<-\frac{19}{3},\ x>3$ as 2 correct inequalities. **Depends on at least one previous M mark.** **A1**: All correct and no other regions. **Depends on all previous marks.**		A1 A1
	Allow equivalent notation for the inequalities e.g. for $-13<x<-8$ allow $x>-13$ and $x<-8,\ x>-13,\ x<-8,\ -8>x>-13, (-13,-8), \{x:x>-13\cap x<-8\}$ But not $x>-13$ or $x<-8$ Note that $-13<x<-\frac{19}{3},\ x\neq-8,\ x>3$ is fully correct.		
			(6)
			Total 6

Note that it is possible to find all the cv's by squaring both sides of the equation:

	$(x=)-8$	This cv stated or used	B1
	$\dfrac{(x^2-9)^2}{(x+8)^2} = (6-2x)^2 \Rightarrow x^4-18x^2+81=(36-24x+4x^2)(x^2+16x+64)$ $\Rightarrow 3x^4+40x^3-74x^2-960x+2223=0 \Rightarrow x=...$ M2 Requires a complete attempt to square both sides, multiply up to obtain a quartic equation and an attempt to solve to find at least 1 critical value other than $x = -8$		M1M1
	Any two of: $x=-13, -\dfrac{19}{3}, 3$	For any two of these cv's. May be seen embedded in their inequalities. **Depends on both previous M marks.**	A1
	$-13<x<-8,\ -8<x<-\dfrac{19}{3},\ x>3$ **A1**: Any 2 of these inequalities. Note that $-13<x<-\dfrac{19}{3},\ x\neq -8$ would count as 2 correct inequalities. Also condone $-13<x<-\dfrac{19}{3},\ x>3$ as 2 correct inequalities. **Depends on at least one previous M mark.** **A1**: All correct and no other regions. **Depends on all previous marks.**		A1 A1
	Allow equivalent notation for the inequalities e.g. for $-13<x<-8$ allow $x>-13$ and $x<-8,\ x>-13,\ x<-8,\ -8>x>-13, (-13,-8), \{x: x>-13 \cap x<-8\}$ But not $x>-13$ or $x<-8$ Note that $-13<x<-\dfrac{19}{3},\ x\neq -8,\ x>3$ is fully correct.		