Question Number	Scheme	Notes	Marks
5	"Solutions relying entirely on calculator technology are not acceptable"		
	$\left\|\dfrac{x^2+5x-2}{x^2+1}\right\| < 2 \Rightarrow \left\|x^2+5x-2\right\| < 2\left(x^2+1\right)$ $x^2+5x-2=2\left(x^2+1\right) \Rightarrow x=...$ **or** $x^2+5x-2=-2\left(x^2+1\right) \Rightarrow x=...$	Multiplies through by x^2+1 and attempts to find at least one pair of cvs from an initially correct equation (no fraction). Usual rules (2 solutions) if 3TQ with solving method seen. If 2TQ allow $ax^2+bx=0 \Rightarrow \{x=0,\}\quad x=\pm\dfrac{b}{a}$ and condone this without factorisation seen	**M1**
	$x^2-5x+4=(x-1)(x-4) \Rightarrow x=1,\ 4 \quad \text{or} \quad 3x^2+5x\{=x(3x+5)\}=0 \Rightarrow x=0,\ -\dfrac{5}{3}$ Identifies 1 correct pair of cvs. The "0" may appear later		**A1**
	$x^2+5x-2=2\left(x^2+1\right) \Rightarrow x=...$ **and** $x^2+5x-2=-2\left(x^2+1\right) \Rightarrow x=...$	Complete method to find all 4 cvs (rules as previous M1)	**dM1**
	$x^2-5x+4=(x-1)(x-4) \Rightarrow x=1,\ 4 \quad \text{or} \quad 3x^2+5x\{=x(3x+5)\}=0 \Rightarrow x=0,\ -\dfrac{5}{3}$ All 4 cvs correct. The "0" may appear later. Ignore extra cvs but no further marks unless they are disregarded.		**A1**
	$x<-\dfrac{5}{3},\quad 0<x<1,\quad x>4$	M1: With 4 cvs a, b, c, d where $a<b<c<d$ identifies $x<a,\quad b<x<c,\quad x>d$ Condone non-strict inequalities. A1: Fully correct. Allow any equivalent correct notation e.g. $\left(-\infty,-\dfrac{5}{3}\right)\cup(0,1)\cup(4,\infty)$ Condone "and" but do not allow $\cap$ for this last mark	**M1** **A1**
	Note that if no 3TQ solving method is seen 110011 is possible but the last two marks cannot be scored if there is no algebra at all. Condone use of a calculator for the last two marks provided there has been some algebra at some point. If squaring is used this leads to: $3x^4-10x^3-13x^2+20x=x\left(3x^3-10x^2-13x+20\right)=x(3x+5)(x-1)(x-4)$ but the first 2 M marks are only scored if there is clear evidence of a non-calculator method for factorising (e.g., factor theorem, grid, etc.) You may also see the difference of two squares e.g., $2^2\left(x^2+1\right)^2-\left(x^2+5x-2\right)^2=\left(3x^2+5x\right)\left(x^2-5x+4\right)=x(3x+5)(x-1)(x-4)=0 \Rightarrow ...$ We must see the factorisation of the 3TQ as with the main scheme		**(6)**
			Total 6