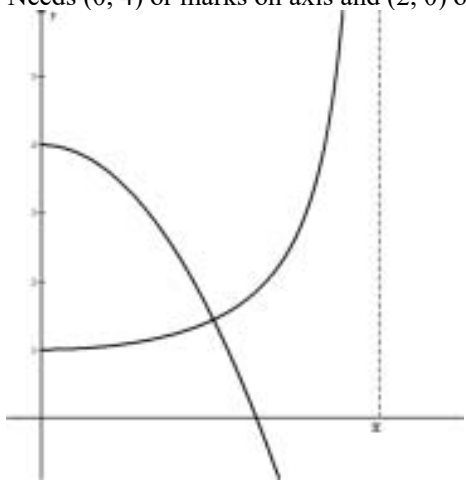


Question	Answer	Marks	Guidance
(a)	Sketch a relevant graph, e.g. $y = 4 - x^2$	<b>B1</b>	Needs (0, 4) or marks on axis and (2, 0) or $(\pi, 0)$ 
	Sketch a second relevant graph, e.g. $y = \sec \frac{1}{2}x$ , and justify the given statement	<b>B1</b>	Needs (0, 1) or mark on axis and $(\pi, 0)$ Asymptote NOT required, but must NOT reach $x = \pi$ . Sec graph must exist over at least interval $\left[0, \frac{3\pi}{4}\right]$ and quadratic graph over $[0, 2.5]$ .
		<b>2</b>	
(b)	Calculate the value of a relevant expression or values of a pair of relevant expressions at $x = 1$ and $x = 2$ .	<b>M1</b>	Need all 4 values or the 2 values correct for M1. Angles in degrees score M0.
	Complete the argument with correct calculated values	<b>A1</b>	
		<b>2</b>	

Question	Answer	Marks	Guidance
(c)	Use the iterative process correctly at least twice	<b>M1</b>	
	Obtain final answer 1.60	<b>A1</b>	Must be 2 d.p.
	Show sufficient iterations to 4 d.p.to justify 1.60 to 2 d.p. or show there is a sign change in the interval (1.595, 1.605)	<b>A1</b>	
		<b>3</b>	

