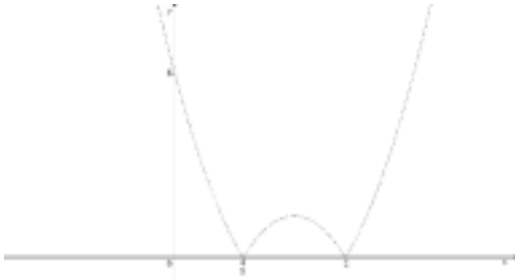
Question	Answer	Marks	Guidance
1(a)	$5\left(x-\frac{7}{5}\right)^2-\frac{9}{5}$	**3**	**B1** for $5(x\pm b)^2$ **B1** for $\left(x-\frac{7}{5}\right)^2$ **B1** for $-\frac{9}{5}$
	Alternative By comparing coefficients: $a(x^2+2bx+b^2)+c=5x^2-14x+8$. $2abx=-14x$ $ab^2+c=8$	**(3)**	**B1** for $a=5$ **B1** for $b=\frac{-14}{10}$ oe **B1** for $c=\frac{-18}{10}$ oe
1(b)	$\left(\frac{7}{5},\ -\frac{9}{5}\right)$	**2**	**FTB1** for each, follow through on *their* a and b from **(a)** **or** **SC1** if differentiation is used in *their* **(a)** or restarted in **(b)** $\frac{dy}{dx}=10x-14=0$ then $\left(\frac{7}{5},\ -\frac{9}{5}\right)$
1(c)		**3**	**B1** for the correct shape. Must have the parabola part of the curve with maximum in the first quadrant and cusps on the x-axis. Ignore labelling of their maximum point if incorrect coordinates **B1** for $\left(\frac{4}{5},\ 0\right)$ and (2, 0), must have a correct shape in the first quadrant. **B1** for (0, 8) must have a correct shape.
1(d)	$0<k<\frac{9}{5}$	**2**	**B1FT** follow through from 0 and *their* $-b$ in part **(a)**
2(a)	$p'(x)=3ax^2+14x+b$ $p''(x)=6ax+14$ leading to $3a+14=32$ $a=6$	**2**	**M1** for attempt to differentiate twice and substitute $x=\frac{1}{2}$