Question	Scheme	Marks
2(a)	$6\times\left(-\frac{1}{2}\right)^2-\left(-\frac{1}{2}\right)q=5\Rightarrow\frac{3}{2}+\frac{q}{2}=5\Rightarrow q=7$	M1A1
	$y=px+9\Rightarrow 7=p\times-\frac{1}{2}+9\Rightarrow p=4$	M1A1 [4]
	ALT	
	$6x^2-x(px+9)=5\Rightarrow\frac{3}{2}-\frac{p}{4}+\frac{9}{2}-5=0\Rightarrow p=4$	[M1A1
	$y=px+9\ \Rightarrow\ q=4\times-\frac{1}{2}+9\Rightarrow q=7$	M1A1]
	ALT 2	
	$6x^2-x(px+9)-5=0$ and $(2x+1)(ax+b)=0\Rightarrow 2ax^2+x(2b+a)+b=0$ $6-p=2a$ and $b=-5$ $-9=2b+a\ \Rightarrow\ -9=2\times-5+a\Rightarrow a=1$ $\therefore 6-p=2\Rightarrow p=4$ $q=4\times-\frac{1}{2}+9=7$	[M1A1 M1A1]
(b)	$6x^2-x(4x+9)=5\Rightarrow 6x^2-4x^2-9x-5=0\Rightarrow 2x^2-9x-5=0$	M1
	$2x^2-9x-5=0\Rightarrow(2x+1)(x-5)=0\Rightarrow x=5$	M1A1
	$y=4\times5+9=29\Rightarrow(5,\ 29)$	A1 [4]
		Total 8 marks

Part	Mark	Notes
(a)	M1	Substitutes $\left(-\frac{1}{2}\right)$ into the quadratic to find the value of q (or y)
	A1	For $q = 7$
	M1	For using the linear equation with y = their q and $x = -\frac{1}{2}$ to find the value of p
	A1	For $p = 4$
	ALT	
	M1	Substitutes the linear expression for y and $\left(-\frac{1}{2}\right)$ into the quadratic to find the value of p
	A1	For $p = 4$
	M1	For using the linear equation with their p and $x = -\frac{1}{2}$ to find the value of q
	A1	For $q = 7$
	ALT 2	
	M1A1	For the complete method which must be shown: • Substituting the linear expression for y into the quadratic • Writing $(2x + 1)(ax + b) = 0$ and expanding • Comparing coefficients for form equations in a, b and p • Solving simultaneous equations to find a, b and p
	M1	For using the linear equation with their p and $x = -\frac{1}{2}$ to find the value of q
	A1	For $q = 7$
(b)	M1	For substituting the linear equation (with their value of p) into the quadratic equation to form a 3TQ in x
	M1	For solving their 3TQ, must be a 3TQ. Independent of the first M. See general guidance on what constitutes an attempt to solve a 3TQ.
	A1	For $x = 5$
	A1	For the other solution to the equations. Does not have to be given as coordinates.
	M1M1A1 may be awarded for correct work in (a) if ALT2 was used, then award the final A mark as per scheme.	