Question Number	Scheme	Marks
6 (a)	$5x+4=x^2+2x-6$	M1
	$x^2-3x-10(=0)$	A1
	$(x-5)(x+2)(=0)$	
	$x=5 \;\; y=29$; $\quad x=-2 \;\; y=-6$	M1A1A1 (5)
(b)	$\int_{-2}^{5}\left((5x+4)-\left(x^2+2x-6\right)\right)\mathrm{d}x$ (either way round)	M1
	$\int_{-2}^{5}\left(-x^2+3x+10\right)\mathrm{d}x$	
	$\left[-\frac{1}{3}x^3+\frac{3}{2}x^2+10x\right]_{-2}^{5}$ (Correct integration of a function, either way round or correct integration of two sep functions)	M1A1
	$=\left(-\frac{125}{3}+\frac{75}{2}+50\right)-\left(\frac{8}{3}+6-20\right)$	dM1
	$=57\frac{1}{6}, \frac{343}{6}$ **must** be positive	A1cao (5)
		[10]

(a)

M1 Eliminate y or x between the two equations to obtain an equation in a single variable

A1 Correct 3 term quadratic

M1 Solve their 3TQ to x = ... or y = ... Calculator solutions must have $x=-2$ and 5 or $y=-6$ and 29 ie both solutions for their variable.

A1 Either pair of coordinates correct

A1 Second pair correct. Coordinate brackets not needed but some indication of pairing is needed

NB Table of values methods score 0/5

(b)

M1 For the integral of "line - curve", either way round. Ignore any limits shown. This mark can be given later if two separate integrals are used - give when the difference of the two integrals is shown.

M1 Integration of the function, either way round or correct integration of two separate functions

A1 Correct integration. Ignore limits for these two marks.

dM1 Substitute their limits (ie their values found in (a)) in the integral of the single function or in both integrals. Both the above M marks must be earned.

A1cao Area $=57\frac{1}{6}$ oe must be positive.

NB If only the line or the curve is integrated score is 0/5