5 Given that k is a non-zero constant

curve C has equation $kx^2 - xy + (k + 1)x = 1$

straight line l has equation $y = \frac{k}{2}x + 1$

The point A is the only point that lies on both C and l.

(a) Find the value of k

(6)

(b) Hence, find the coordinates of A.

(2)

Question 5 continued

(Total for Question 5 is 8 marks)