

- 3 (a)** Determine, in terms of  $k$ , the coordinates of the point where the lines with the following equations intersect.

$$x + y = k$$

$$2x - y = 1 \quad [3]$$

- (b)** Determine, in terms of  $k$ , the coordinates of the points where the line  $x + y = k$  crosses the curve  $y = x^2 + k$ . [4]