

- 4** The equation of a curve is $y^2 + 2x = 13$ and the equation of a line is $2y + x = k$, where k is a constant.
- (i) In the case where $k = 8$, find the coordinates of the points of intersection of the line and the curve. [4]
- (ii) Find the value of k for which the line is a tangent to the curve. [3]