

**1992 AB4/BC1**

Consider the curve defined by the equation  $y + \cos y = x + 1$  for  $0 \leq y \leq 2\pi$ .

- (a) Find  $\frac{dy}{dx}$  in terms of  $y$ .
- (b) Write an equation for each vertical tangent to the curve.
- (c) Find  $\frac{d^2y}{dx^2}$  in terms of  $y$ .