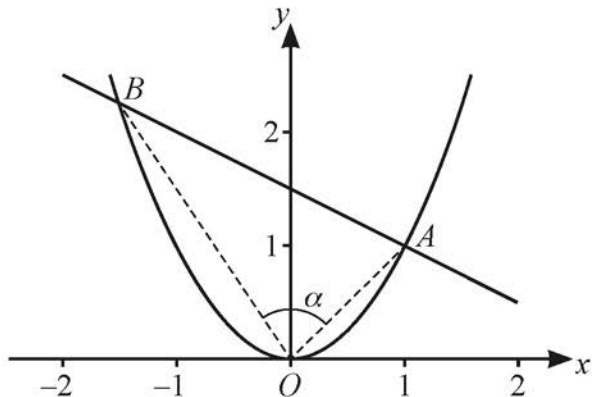


- 4 The diagram shows part of the graph of  $y = x^2$ . The normal to the curve at the point  $A(1, 1)$  meets the curve again at  $B$ . Angle  $AOB$  is denoted by  $\alpha$ .



- (a) Determine the coordinates of  $B$ . [6]
- (b) Hence determine the exact value of  $\tan \alpha$ . [3]