

Quiz**Name**

1. Use Leibniz's tangent method to compute the slope of the tangent to the curve $y^2 = x^2 + 2$ at any point $P = (x, y)$. What is the slope of the tangent at the point $(1, \sqrt{3})$ and at $(2, \sqrt{6})$?

2. Consider the function $f(x) = \sqrt{x^2 + 2}$ and use the conclusion of Problem 1 to show that the derivative of this function is $f'(x) = \frac{x}{\sqrt{x^2 + 2}}$.