

1. Find the derivative of each of the following functions. You do not need to simplify your answers.

1A. $m(x) = e^{\sin(2x)}$

1B. $q(x) = (x^3 + \log_2 x) x^5$

1C. $k(x) = \ln(\sqrt[3]{x^4 + \cos(7x)} + x^5)$

1D. $p(x) = \frac{\sin(x) + x^6}{x^5 + \cos(x)}$

THIS QUIZ CONTINUES ON THE OTHER SIDE!

2. The equation $x^4 + y^3 = x^2y^2 + 1$ implicitly defines y as a function of x , and a graph of this equation is shown at the bottom of the page.

2A. Use implicit differentiation to find y' .

2B. The graph implies that $(1, 1)$ is a solution of the equation; show that $(1, 1)$ does indeed satisfy the equation.

2C. Use the answer to 2A to find the slope of the graph of the equation at $(1, 1)$.

