University of Bahrain
Department of Mathematics
MATHS101: Calculus I
Dr. Abdulla Eid

Worksheet: Implicit Differentiation

Students' Name: _____

1. Find $\frac{dy}{dx}$ for $xy = 1$ by two ways, implicit and explicit.

2. Find y' for the following:

    1. $x + e^y = y + e^x$.

    2. $xy = \cot(y)$.

3. Find an equation of the normal line at $(3,3)$ for the folium of Descarte' curve given by $x^3 + y^3 = 6xy$.

4. Find y'' for $\sin y + \cos x = 1$.