

3.7b Implicit Differentiation

Show that $\frac{dy}{dx}$ is defined at every point on the graph of

$$2y = x^2 + \sin(y)$$

Graph the curve using parametric equations

Sep 18-8:23 AM

$$x^2 - 2xy + y^2 = 4$$

find $\frac{dy}{dx}$

Use $\frac{dy}{dx}$ to sketch a possible graph of the implicit curve

Factor the left side and solve for y.
How does this compare with your graph?

Sep 18-8:27 AM

Find the slope of the Folium of Descartes at the points (4,2) and (2,4).

$$x^3 + y^3 - 9xy = 0$$

Find the points where the folium has:

- a) a horizontal tangent
- b) a vertical tangent

Sep 18-8:32 AM