



Graph of the implicit relation $x^3 + y^3 + 3xy = 0$

1. The curve has two points corresponding to $x=-1$. Find the y coordinate for each of these points.
2. Draw a tangent line at each of the two points corresponding to $x=-1$. Estimate the slope of each line you draw.
3. Use implicit differentiation to compute the derivative $\frac{dy}{dx}$. Evaluate this for $x=-1$ and each of the relevant values of y .
4. Compare the results of 2 and 4. Are these consistent with each other? (Keep in mind that the result in 2 is an estimate.)