

Below is part of the graph of $5x^3y - 3xy^2 + y^3 = 6$. Verify that $(1, 2)$ is a point on this curve. There's a nearby point on the curve whose coordinates are $(1.07, u)$. What is an approximate value for u ? There's a nearby point on the curve whose coordinates are $(.98, v)$. What is an approximate value for v ? There's a nearby point on the curve whose coordinates are $(w, 2.04)$. What is an approximate value for w ? Is the graph consistent with your answers?

Hint Compute a derivative and use linear approximation.

