TOTAL POINTS VALUE: 5
(Q5) Use Newton’s method to find a zero of the same function

\[ y = f(x) = 2x^3 - x^4 + 4 \]

starting from \( x_0 = 1 \), correct to 9 decimal places. Please carefully list the values you get:

\[
x_0 = 1 \\
x_1 = \text{______________} \\
x_2 = \text{______________} \\
x_3 = \text{______________} \\
x_4 = \text{______________}
\]

What happens if your initial guess is \( x_0 = 2 \)? State whether Newton’s method still works, and if so, to what root it will converge: