Question —— assigned:

1. Given x_0, x_1, x_2, x_3 and a function f, give the expression of the unique polynomial $P(x)$ such that $f(x_k) = P(x_k)$, for $k = 0 \ldots 3$.

2. Give one difference and one common aspect between the Newton's method and the fixed-point iteration. Be precise and short.

3. What is the difference between the Newton's method and the Secant method (be precise and short, maximum 2 lines) ?