Question —— assigned:

1. Explain the differences between the 3-step Adams-Bashforth method and 3-step Adams-Moulton method (order of error bound, key features of the method, etc.) .

2. Apply Taylor's formula to the function $g(x, y) = \sin(xy) + y^2$ about $(1, 2)$. Provide the constant and linear terms.

3. Explain the differences between the nth order Taylor's method and Runge-Kutta of order n (order of error bound, key features of the method, etc.) .