1. (10) Suppose we use an Adams PECE scheme to solve a differential equation \( y' = f(t, y) \) and obtain \( y_n^P = 1.2450 \) and \( y_n^C = 1.2430 \). Suppose the error formula for the predictor is \( \frac{5h^3}{12} y^{(3)}(\eta) \) and for the corrector is \( \frac{h^4}{24} y^{(4)}(\xi) \). What can you say about the error? (Give an unambiguous statement about what error you mean and what your estimate of it is.)
2a. (5) Give an important advantage of PECE Adams methods over Runge-Kutta methods.

2b. (5) Consider the differential equation \( y' = f(t, y) \), with \( y : \mathbb{R}^1 \rightarrow \mathbb{R}^2 \). Given \( t_1 \) and \( y(t_1) \), how do you test whether the differential equation is stiff at \( t_1 \)?