Adams-Bash forth predictor & corrector method

1. Write down Adams-Bash forth predictor & corrector formulae.

   Adams predictor & Corrector formulae are

   $$y_{n+1,p} = y_n + \frac{h}{24}[55 y_n' - 59 y_{n-1}' + 37 y_{n-2}' - 9 y_{n-3}']$$

   $$\text{(or) } y_{n+1,c} = y_n + \frac{h}{24}[9 y_{n+1}' + 19 y_n' - 5 y_{n-1}' + y_{n-2}']$$

2. How many prior values are required to predict the next value in Adams method?

   Four prior values.

3. What is a predictor-corrector method of solving a differential equation?

   predictor-corrector methods are methods which require the values of y at $x_n, x_{n-1}, x_{n-2}, x_{n-3}$ for for computing the values of y at x_{n+1}. we first use a formula to find the value of y at x_{n+1} and this is known as predictor formula. the value of y is got is corrected by another formula known as corrector formula.