Q2:

Given: Arbitrary integers A0, A1, A2 and a polynomial 

Aim: Find an algorithm that squares P(x) with 5 large integer multiplications.

Solve:

Substitute y = , then P(x)\*P(x) will be 

 = 

In order tot find the P0,P1,P2,P3,P4 then we need five values of 

Take y = <-2,-1,0,1,2> into the function , then the equation is











 = ,

 = ,

 = ,

 = ,

 = .

Only more than one of the power of y multiply each others can be counted as a large number multiplication. Because the y is large number, A0,A1,A2 are given as integer number. By the above then take the x in  = .So there are 5 large integer multiplication.