## Question 1a – Adding Polynomials)

INT TOTAL

IF LENGTH[P1] < LENGTH[P2]

RES[1] <- P1[1]

FOR i <- 1 TO LENGTH[P2]

TOTAL <- P1[i+1] + P2[i]

RES[i+1] <- TOTAL

ELSE IF LENGTH[P2] < LENGTH[P1]

RES[1] <- P2[1]

FOR i <- 1 TO LENGTH[P1]

TOTAL <- P1[i]+P2[i+1]

RES[i+1] <- TOTAL

ELSE

FOR i <- 1 TO LENGTH[P1]

TOTAL <- P1[i]+P2[i]

NEW[i] <- TOTAL

## Question 1c – Finding the Differential)

INT x <- LENGTH[P1]

INT y <- LENGTH[P2]

FOR i <- 0 TO x

INT TOTAL <- P1[0] \* x

x += -1

IF TOTAL != 0

RES[i] <- TOTAL

FOR i <- 0 TO y

INT TOTAL <- P2[0] \* y

y += -1

IF TOTAL != 0

RES2[i] <- TOTAL

## Question 2