ALGORITHM 29
POLYNOMIAL TRANSFORMER
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procedure  POLYX (a, b, c, d, n)  ;  value a, b, n  ;  integer
             n  ;  real  a,  b  ;
           real array c, d  ;
comment  POLYX computes coefficients d0, d1, . . . , dn of the
           transformed polynomial p(t) given c0, c1, . . . ,
           cn of p(x) where x = at + b  ;
begin integer i, j, k  ;  real array z, w [0:n]  ;
    w[0] := z[0] := 1  ;  d[0] := c[0]  ;
    for i := 1 step 1 until n do
        begin w[i] := 1  ;  z[i] := b × z[i − 1]  ;
          d[0] := d[0] + c[i] × z[i]
        end of initialization  ;
    for j := 1 step 1 until n do
        begin w[0] := w[0] × a  ;  d[j] := c[j] × w[0]  ;
          k := 1  ;
            for i := j + 1 step 1 until n do
                begin w[k] := a × w[k] + w[k − 1]  ;
                    d[j] := d[j] + c[i] × w[k] × z[k]  ;
                    k := k + 1 end
end
end  of POLYX polynomial transformer
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