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% Derive Shape functions for rod/torsion element
% For all points, the polynomials N and N' are evaluated.
% w=a+bx
b=[1 -1; % w(-1) x^n
   1  1];% w(1) x^n
b=fliplr(b);
disp('b flipped to decreasing power order')
% For N1
a=[1 0]';
c1=(b\a) '
c1d=polyderiv(c1)
% For N2
a=[0 1]';
c2=(b\a) '
c2d=polyderiv(c2)

i=-1:.01:1;
plot(i,polyval(c1,i),i,polyval(c2,i))

%plot(i,polyval(c1,i),'-;sf1;',i,polyval(c2,i),'-
;sf2;',i,polyval(c3,i),'-;sf3;',i,polyval(c4,i),'-
;sf4;',i,polyval(c5,i),'-;sf5;',i,polyval(c6,i),'-;sf6;')

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