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function [f] = piecepoly2(t,alpha)
%PIECEPOLY2 plots 4th order b splines given t and alphas
f = 0.*t;
for k=0:4
    b2 = 0.*t;
    for i=1:length(b2)
        if (t(i)-k) < -1.5
            b2(i) = 0;
        elseif (t(i)-k) < -0.5
            b2(i) = (t(i) - k +1.5)^2 / 2;
        elseif (t(i)-k) < 0.5
            b2(i) = -(t(i) - k)^2 + 0.75;
        elseif (t(i)-k) < 1.5
            b2(i) = (t(i) - k - 1.5)^2 / 2;
        else
            b2(i) = 0;
        end
    end
    f = f + b2 .* alpha(k+1);
end
plot(t,f);
end
```