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Subject: Re: Yet another user with poly\_fit problems  
Posted by [Ken G](#) on Wed, 02 Oct 2013 17:35:35 GMT

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I feel compelled to jump in here and say that the interpolation method is mathematically dicey and I wouldn't do it. What you're essentially doing is weighting your data points in a very non-linear way. We see that the first few points are clustered closely together in x; the last few points are widely separated. The uniform x spacing in the linear interpolation therefore devotes \*many\* more points to the large-x-value region relative to the number of y points out there to support the data. So in your fit result, you're biasing or weighting the data as if the large y were the most significant point by far. You can see this in the results if you `plot newX, D`. There's a downward bulge in D between the last two points as the weighting pulls the curve down toward the linear interpolation. Plus, D fails to come close to the first 2 points.

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