

```

(%i1) P1 = [1.,0,(-0.7994038854e11)/29859840000,
0,0.1124543793e12/123834728448,
0,(-0.4272370667e14)/619173642240000];

(%o1) P1 = [1,0,-2.677187437708976,0,0.908100503868115,0,-0.0690011714895314]

(%i2) P2(x) := 1 +
(x^2 * (-0.7994038854e11)/29859840000) +
(x^4 * 0.1124543793e12/123834728448) +
(x^6 * (-0.4272370667e14)/619173642240000);

(%o2) P2(x) := 1 +  $\frac{x^2 (-7.994038854 \cdot 10^{10})}{29859840000}$  +
 $\frac{x^4 1.124543793 \cdot 10^{11}}{123834728448}$  +  $\frac{x^6 (-4.272370667 \cdot 10^{13})}{619173642240000}$ 

(%i3) plot2d([cos(0.816326530612*%pi*x),cos(1.183673469387*%pi*x),P2(x)], [x,-3.1,3.1],
[gnuplot_term, ps],
[gnuplot_out_file, "/home/dirk/Documents/Phoenix/Maxima/Poly-6th-deg_2.eps"])$

(%i4) Err = float((cos(0.5 * 0.816326530612 * %pi) - P2(0.5)) /
cos(0.5 * 1.183673469387 * %pi) - P2(0.5));

(%o4) Err = -0.02840652722534792

```