

Numerical Algorithms - First Implementation

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* Comparations of the error for each function:

$$f(x) = \frac{1}{1+x^2}, x \in [-5, 5]$$

	Lagrange	Piecewise
N	$\ f - P_N\ _{\infty}$	$\ f - P_N\ _{\infty}$
2	0,6462	0,4181
4	0,4384	0,1802
6	1,0452	0,0639
8	14,3939	0,0536

$$y = \sin(x), x \in [0, \pi]$$

	Lagrange	Piecewise
N	$\ f - P_N\ _{\infty}$	$\ f - P_N\ _{\infty}$
2	1,0093	0,4181
4	1,0380	1,1802
6	1,3428	0,0639
8	1,3437	0,0536

	Piecewise	
N	$\ f - P_N\ _{\infty}$	$\frac{\log(\dots)}{\log 2}$
2	0,4181	-1,2580
4	1,1802	0,2390
8	0,0639	-3,9680
...		
1024		

Simão