
```
% HW 5 Additional Question 2
```

```
f = @(x) 1./(1+25.*x.^2);
```

```
x = linspace(-1, 1, 400);
```

```
n = 20;
```

```
hold on
```

```
nodes_equi = linspace(-1, 1, n);
```

```
equi_interp = lagrange_interp(nodes_equi, f(nodes_equi), x);
```

```
nodes_cheby = zeros(n, 1);
```

```
for i = 1:n
```

```
    nodes_cheby(i) = cos(pi*(2*i-1)/(2*n));
```

```
end
```

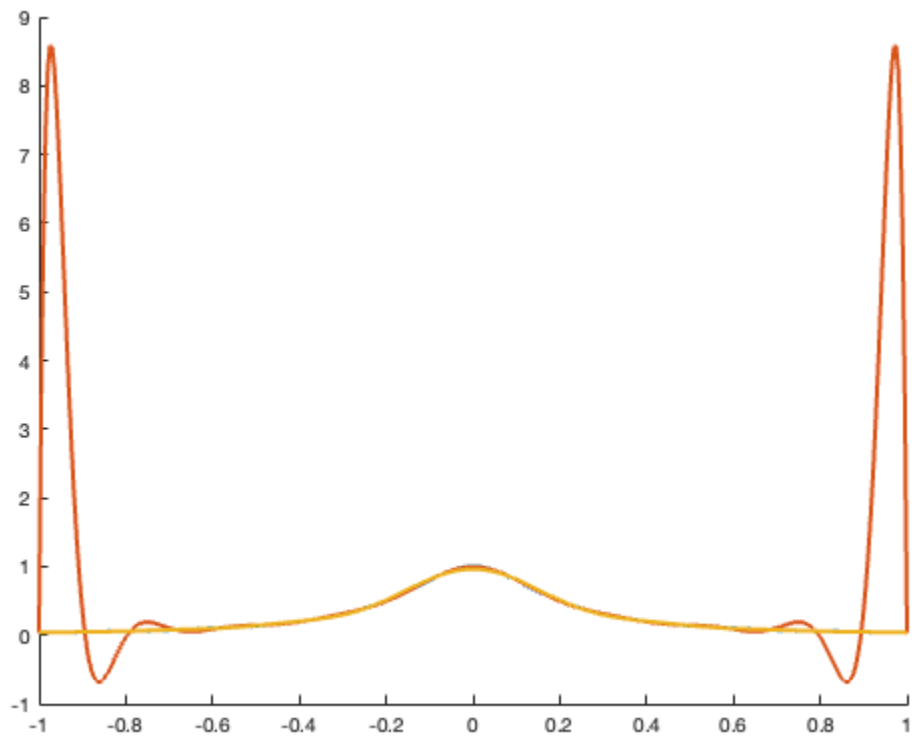
```
cheby_interp = lagrange_interp(nodes_cheby, f(nodes_cheby), x);
```

```
plot(x, f(x), LineWidth=2);
```

```
plot(x, equi_interp, LineWidth=2);
```

```
plot(x, cheby_interp, LineWidth=2);
```

```
hold off
```



Published with MATLAB® R2023b