Write the sixth degree Maclaurin Polynomial for

$$f(x)=\sqrt{x+1}$$

Then find an interval centered at

X=0 so that $\left|f(x)-P_6(x)\right|<0.01$

Find the MacLaurin Polynomial of degree 4 for

$$y = e^{x^2}$$

Write the sixth degree Taylor Polynomial to approximate

$y = \ln\left(x\right)$ near x=1

Use your approximation to estimate ln(2)

Use your calculator to estimate the error.

Write the sixth degree polynomial for cos(x) near zero.

Estimate the error if it is used to approximate cos(0.25)

Write the fifth degree Taylor polynomial approximating e^x near zero

Use it to estimate $\sqrt{e}$

Use Taylor's theorem to estimate the error in your approximation.

Suppose we wanted to estimate e^x to five digit accuracy. What interval would we have to use?

What degree would be required to get 5 digit accuracy for $\sqrt{e}$?

Write the third degree Maclaurin Polynomial for

$$f(x)=\frac{2}{3}(x+1)^{\frac{3}{2}}$$

Then use the Taylor remainder theorem to find an interval centered at

X=0 so that $\left|f(x)-P_3(x)\right|<0.01$

If we wished to find f(1.4) correct to ten decimal places, how many terms would we need?