

Write the sixth degree Maclaurin Polynomial for

$$f(x) = \sqrt{x+1} \quad \text{Then find an interval centered at}$$

$$x=0 \text{ so that} \quad \left| f(x) - P_6(x) \right| < 0.01$$

Write the sixth degree Maclaurin Polynomial for

$$f(x) = \frac{2}{3}(x+1)^{\frac{3}{2}} \quad \text{Then find an interval centered at}$$

$$x=0 \text{ so that} \quad \left| f(x) - P_6(x) \right| < 0.01$$

Write the sixth degree Taylor Polynomial to approximate

$$y = \ln(x) \text{ near } x=1$$

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} ?