

Taylor Polynomial Practice

1. Consider the function

$$f(x) = \cos(x)$$

Compute the 5th degree Taylor polynomial of $f(x)$ centered at 0.

2. Consider the function

$$g(x) = \ln(x)$$

Compute the 5th degree Taylor polynomial of $g(x)$ centered at 1.

3. Consider the function

$$h(x) = e^x$$

Compute the 5th degree Taylor polynomial of $h(x)$ centered at 0. How could you use this to approximate e ?