

Name _____

Homework 16
section 10.1

1. (7) Find the degree 10 Taylor polynomial approximating $f(x) = \cosh x$ near $x = 0$.

2. (7) Construct the Taylor polynomial of degree 3 approximating $f(x) = xe^{2x}$ near $x = 0$.

3. (6) Given $f(3) = 4$, $f'(3) = -1$, $f''(3) = 2$, and $g(3) = 5$, $g'(3) = 3$, $g''(3) = -2$, use a Taylor polynomial to approximate $h(2)$, where $h(x) = f(x)g(x)$.