

Name : _____

1. Consider the function $f(x) = e^{-x}$.

a. Find the **Taylor polynomials of order 2** centered at $x = 0$ for $f(x) = e^{-x}$.

b. Estimate the value of $e^{-0.2}$.

2. Consider the function $f(x) = \sqrt{x}$.

a. Find the **Taylor polynomials of order 3** centered at $x = 4$ for $f(x) = \sqrt{x}$.

b. Estimate the value of $\sqrt{5}$.