

3. Find the Taylor Series expansion for $f(x) = \frac{1}{x^2}$ centered at $a = 1$.

4. Using the common Maclaurin series' (page 808 in text), determine the Maclaurin series' for the following functions.

a) $f(x) = x \sin(3x)$

b) $f(x) = xe^{-x}$