11.10 - Taylor and Maclaurin Series

Calculus II

1a. **Find the Taylor series for f centered at 8 if** $f^{(n)}(8) = \frac{(-1)^n n!}{5^n(n+4)}$

1b. **What is the radius of convergence R of the Taylor series?**

2a. **Find the Maclaurin series for f(x) using definition of a Maclaurin series.** $f(x) = 3(1-x)^{-2}$

2b. **Find the associated radius of convergence R.**

3a. **Find the Maclaurin series of f(x) using definition of a Maclaurin series.**
$f(x) = cos(x)$

3b. **Find the associated radius of convergence R.**

4a. **Find the Taylor series for f(x) centered at the given value of a.**
$x^5 + 4x^3 + x, a = 3$

4b. **Find the associated radius of convergence R.**