Math 2260 Quiz 19.5 (Practice)

Name _____

Points will be deducted for untidy or disorganized answers

1. (2 points) Find the sum of the series

$$\sum_{n=1}^{\infty} \frac{(-1)^n}{4^n} x^{2n+1}$$

for those values of x that lie within the interval of convergence.

2. (3 points)

   (a) Find a power series representation for the function

   $$f(x) = \frac{8}{(2+x)^3}$$

   and determine the interval of convergence.

   (b) Evaluate

   $$\sum_{n=0}^{\infty} \frac{(-1)^n (n+2)(n+1)}{4^{n+1}}$$