

Name: _____

Section: _____

Clear your desk of everything except pens, pencils and erasers. **Show all your work.**

If you have a question raise your hand and I will come to you.

1. (5 points) Find the interval of convergence for the following series:

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

2. (5 points) Consider the function $f(x) = \frac{8}{1+5x}$.

(a) Find the power series representation for f in sigma notation.

(b) Give its radius of convergence.