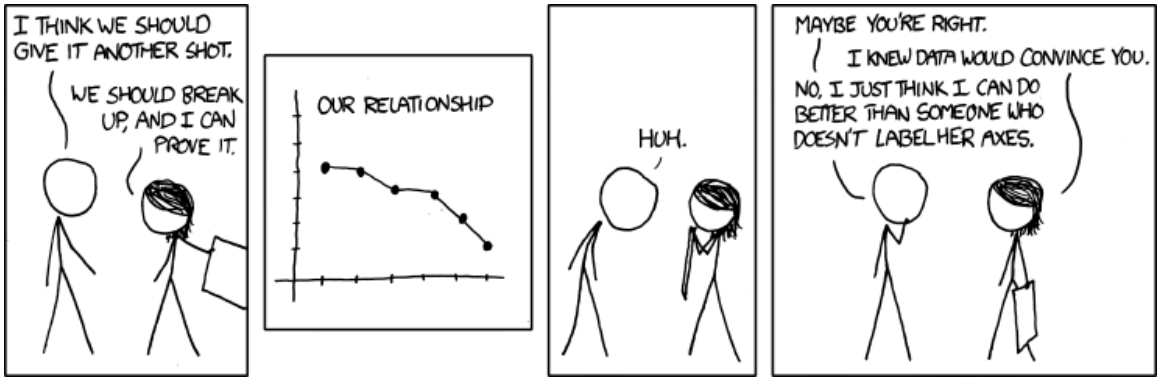
Name _____

Homework 15
Section 9.5

1. (4) Write the following series in summation (Σ) notation (with the index of the sum starting at 0).

$$-1 + 2\frac{(x-3)^2}{3!} - 4\frac{(x-3)^4}{5!} + 8\frac{(x-3)^6}{7!} - 16\frac{(x-3)^8}{9!} + \cdots$$

Just a random comic, since there was a lot of blank space.



2. (5) Find the radius and interval of convergence of $\sum_{n=1}^{\infty}(-1)^n\frac{3^n}{n!}(x-4)^n$

3. (5) Find the radius and interval of convergence of $\sum_{n=0}^{\infty} \frac{n!}{100^n}(x+2)^n$

4. (6) Find the radius and interval of convergence of $\sum_{n=1}^{\infty} \frac{2}{3^n\sqrt{n}}(x-5)^n$