MATH 166
SUMMER 2012
QUIZ 22

1. Consider the power series

$$\sum_{n=0}^{\infty} \frac{3^n}{2^{2n}} x^{3n+2}.$$

   a) (5 pt) Find the center, radius, and interval of convergence for this series.
   b) (5 pt) Write this series as a rational function. (Hint: for both parts, it might make it easier to think of this as a geometric series)

2. Consider the power series

$$\sum_{n=0}^{\infty} \frac{x^n}{n!}$$

   a) (5 pt) Find the interval of convergence of this series.
   b) (5 pt) Evaluate $\lim_{n\to\infty} \frac{x^n}{n!}$.