Math 386   Quiz 1   (11/2/2010)   Your Name_____

Simplify. 5 points each.

(1) $2 + 6x + 18x^2 + 54x^3 + \cdots$

(2) $1 + x + x^2 + x^3 + \cdots + x^{20}$

(3) $\displaystyle\sum_{n=0}^{\infty}(n+1)x^n$

(4) $1 + \dbinom{10}{1}x + \dbinom{11}{2}x^2 + \dbinom{12}{3}x^3 + \cdots$