SECTION 6.1: POWER SERIES (DAY 1)

(1) A **power series centered at** $x = 0$ has the form:

(2) A **power series centered at** $x = a$ has the form:

(3) Some Examples

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

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

(4) Convergence of a Power Series.

(5) Determine the **radius** and **interval** of convergence for the power series below.

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

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