

## Equations

### Problem 2:

The value of  $\cos(x)$  can be approximated using the following infinite series:

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

### Problem 6:

The number-average degree of polymerization,  $X_n$ , for a given extent of reaction,  $p$ , can be determined from the following equation:

$$X_n = \sum_{k=1}^{\infty} k \cdot p^{k-1} \cdot (1-p)$$