1   Summations

- $\sum_{i=1}^{n} i$

- $\sum_{i=1}^{\log(n)} 2^i$

- $\sum_{i=1}^{n} \frac{n}{i}$

- $\sum_{i=1}^{n} \log(i)$

- $\sum_{i=1}^{n} n\frac{1}{2^i}$

2   Recurrences

- $T(n) = 2T(\frac{n}{2}) + \theta(1)$

- $T(n) = 4T(\frac{n}{2}) + \theta(n)$

- $T(n) = 2T(\frac{n}{2}) + \theta(n \log n)$

- $T(n) = kT(\frac{n}{k}) + \theta(n)$, for some fixed positive integer $k \geq 2$.

- $T(n) = T(\frac{n}{2}) + T(\frac{n}{3}) + \theta(n)$

- $T(n) = T(\frac{n}{10}) + T(\frac{9n}{10}) + \theta(n)$, just a loose bound will do.