Master Method

Let T(n) be a monotonically increasing function (a function that is increasing and non-decreasing).

If

$$T(n) \leq aT(n/b) + O(n^d)$$

Then,

$$T(n) = \begin{cases} O(n^d logn) & \text{if } a = b^d \\ O(n^d) & \text{if } a < b^d \\ O(n^{\log_b a}) & \text{if } a > b^d \end{cases}$$