



At level i we have 2^i nodes. If we have $\log(n)$ levels then total nodes are $\sum_i 2^i$ for $i=0$ to $\log(n)$. The last term in the sum is $2^{\log(n)} = n$. If each term is at most n and we sum $\log(n)$ times then total is at most $n \log(n)$. The second to last term is $2^{\log(n)-1} = n/2$. The total sum is $n + n/2 + n/4 + \dots + 2 + 1$