T(n) = 2T(n/2) + n

= 2(2T(n/4) + n/2) + n = 4T(n/4) + n + n = 4T(n/4) + 2n

= 4(2T(n/8) + n/4) + 2n = 8T(n/8) + n + 2n = 8T(n/8) + 3n

= 8(2T(n/16) + n/8)+ 3n = 8T(n/16)+ n + 3n = 16T(n/16) + 4n

... = 32T(n/32) + 5n

...

= n\*T(1) + log2(n)\*n

= O(n\*log2(n))