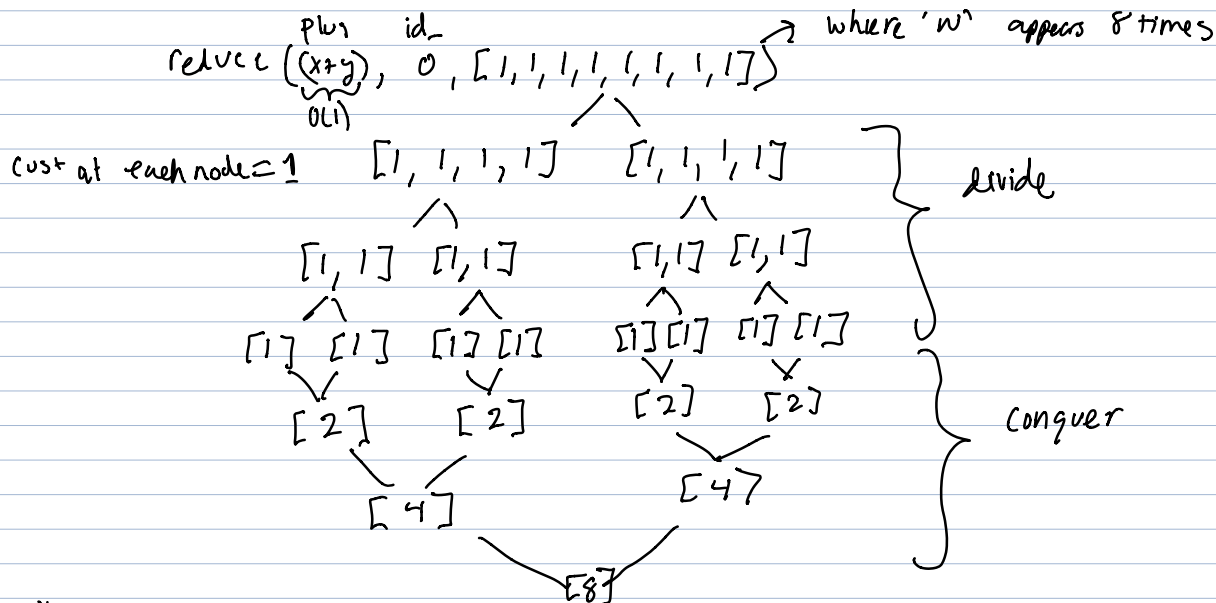


Work + Span of word-count-reduce

pass  $[1, 1, 1, 1, 1, 1, 1, 1]$  into reduce



work  $T(n) = 2T(n/2) + 1$

Solve recurrence:  $\sum_{i=0}^{\lg n} 2^i \Rightarrow \frac{2}{1} \underbrace{2^{\lg n}}_n \Rightarrow 2n \Rightarrow O(n)$

span:  $\sum_{i=0}^{\lg n} 1 \Rightarrow \lg n + 1 \Rightarrow O(\lg n)$