A Parallel Algorithm For Maximal Clique Detection
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The Problem

--2 (Professor is Russ Miller miller@buffalo.edu)

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The Sequential Solution
1 We enumerate through all graphs of size $n = 3$ and check for completeness

2 For each complete graph check all graphs of size $n+1$ in which it is included
Note: we only need to check nodes greater than the highest value in complete graph!

Repeat Step 2

--5 Parallel solution 6 7 8

Run Time
A naïve approach will search all $2^n$ permutations

But remember, we never search larger graphs than we need to...
Must be a function of $M(x)$
$M(x)$ appears to grow
As $\mathcal{O}(\log[n])$ for wide density range

10 11 12 etc

Closing the Gap

We want to kill off all but the last term
Without imposing a strict identity on $M(n)$
We must guarantee increasing slope over some region and verify true
for the bottom end

We want some domain of $x$, $\ldots \geq 0 \ldots$ (stuff missing)
such that $\ldots \partial \ldots i$
$2 \left( \ldots \right)$