

Which of the following are equivalent to $O(N)$?

- 1) $O(N + P)$, where $P < N/2$ - When P is less than half of N it is not significant enough to include, so it can be simplified to $O(N)$
- 2) $O(2N)$ - We can drop the constant 2, leaving $O(N)$
- 3) $O(N + \log N)$ - $\log N$ is a non-dominant term, so it can be dropped, leaving us with $O(N)$
- 4) $O(N + M)$ - Without knowing anything about N or M we are unable to simplify this further

Algorithms & Big O Notation

CS in the Morning! ☀️