## CSE 332: Data Abstractions

## QuickCheck: Asymptotics (due Thursday, October 8)

Name: $\square$
0. $\mathcal{O}$ boy!

For each of the following rows, circle each option on the right that is true for the function on the left and X each option that is false for the function on the left.

| $n^{2}$ | $\mathcal{O}(n)$ | $\Omega\left(n^{2}\right)$ | $\mathcal{O}\left(n^{n}\right)$ | $\mathcal{O}(\log n)$ |
| :---: | :---: | :---: | :---: | :---: |
| $2 n+n \log n$ | $\mathcal{O}(n)$ | $\mathcal{O}(n \log n)$ | $\mathcal{O}(\log n)$ | $\mathcal{O}(1)$ |
| $\log \left(3^{n}\right)$ | $\mathcal{O}(\log n)$ | $\mathcal{O}(n)$ | $\Omega(\log n)$ | $\mathcal{O}\left(2^{n}\right)$ |
| $\log \left(n^{3}\right)$ | $\mathcal{O}(\log n)$ | $\Omega(n)$ | $\Omega(\log n)$ | $\Omega\left(n^{3}\right)$ |

