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Convex Hull Algorithm Analysis

As you can see in the charts below, the Brute force algorithm is exponentially slow compared to the Graham Scan algorithm. So much so that at input 100000 the Brute Force algorithm did not finish running in a reasonable time frame. The Graham Scan, with its stack and polar angle based method, allows for a consistent N Log N run time.

Number of Points	Brute Force (Sec)	Graham Scan (Sec)
10	0.009	0.012
100	0.014	0.021
1000	0.094	0.014
10000	0.979	0.052
100000 NaN		0.418

NaN = Did not finish in a timely fashion

Brute Force (Sec) and Graham Scan (Sec)