

Convex Hull, Comparison			
Case 1: All points lie on the convex hull			
Input size(n)	Graham Scan	Quickhull	Gift Wrapping
100	0.000325	0.00048	0.000744
1000	0.002013	0.000451	0.043959
2000	0.004992	0.001803	0.109921
5000	0.011769	0.003491	0.426722
10000	0.024212	0.007352	1.517892

All points lie on Convex Hull

The graph illustrates the time complexity of three convex hull algorithms when all points lie on the convex hull. The x-axis represents the number of points (100, 1000, 2000, 5000, 10000), and the y-axis represents time (0 to 2). Graham Scan (blue line) and Quickhull (red line) show linear growth in time as the number of points increases. Gift Wrapping (orange line) shows quadratic growth, with its time increasing significantly faster than the other two algorithms as the number of points increases.

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Case 2: No. of points lying on the convex hull \neq n.			
Input size(n)	Gift Wrapping	Graham Scan	Quickhull
100	0.000441	0.000571	0.000571
1000	0.002105	0.002632	0.000857
2000	0.003782	0.007014	0.002125
5000	0.010919	0.017824	0.009671
10000	0.015782	0.035678	0.012532

