

Windows 11 - Intel i7-10700 CPU @ 2.90GHz

Starting 1,000,000 point test  
Scale: 50,000  
Sorting  
Processing points  
Elapsed time: 9525 ms  
Segments: 2,999,959  
Triangles: 1,999,960  
Convex hull: 38 points  
Parabola intersections: 67,910,066  
Circle tests: 6,999,914  
BF insert comparisons: 9,778,741  
BF delete comparisons: 22,176,301  
Number of priority queue records created: 3,604,557  
Max BF count: 1822  
Max BF depth: 13  
Max PQ count: 1036  
Max PQ depth: 13

Without tree structure:  
BF insert comparisons:  
(average size of BF = 900)  
 $1,000,000 * 900 = 900,000,000$

---

Starting 500,000 point test  
Scale: 50,000  
Sorting  
Processing points  
Elapsed time: 4426 ms  
Segments: 1,499,964  
Triangles: 999,965  
Convex hull: 33 points  
Parabola intersections: 32,448,489  
Circle tests: 3,499,921  
BF insert comparisons: 4,637,863  
BF delete comparisons: 10,586,392  
Number of priority queue records created: 1,802,720  
Max BF count: 1341  
Max BF depth: 13  
Max PQ count: 739  
Max PQ depth: 12

---

Starting 250,000 point test  
Scale: 50,000  
Sorting  
Processing points  
Elapsed time: 2098 ms  
Segments: 749,962  
Triangles: 499,963  
Convex hull: 35 points  
Parabola intersections: 15,500,944  
Circle tests: 1,749,918  
BF insert comparisons: 2,198,235  
BF delete comparisons: 5,052,247  
Number of priority queue records created: 900,821  
Max BF count: 966  
Max BF depth: 12  
Max PQ count: 523  
Max PQ depth: 11

### Raspberry Pi 3B

Starting 40,000 point test  
Scale: 50,000  
Sorting  
Processing points  
Elapsed time: 3920 ms  
Segments: 119970  
Triangles: 79971  
Convex hull: 27 points  
Parabola intersections: 2,167,851  
Circle tests: 279933  
BF insert comparisons: 299,800  
BF delete comparisons: 704,135  
Number of priority queue records created: 143,826  
Max BF count: 422  
Max BF depth: 11  
Max PQ count: 235  
Max PQ depth: 10

---

Starting 20,000 point test  
Scale: 50,000  
Sorting  
Processing points  
Elapsed time: 1897 ms  
Segments: 59,964  
Triangles: 39,965  
Convex hull: 33 points  
Parabola intersections: 1,037,163  
Circle tests: 139921  
BF insert comparisons: 142,191  
BF delete comparisons: 336,399  
Number of priority queue records created: 71,763  
Max BF count: 310  
Max BF depth: 10  
Max PQ count: 171  
Max PQ depth: 9

---

Starting 10,000 point test  
Scale: 50,000  
Sorting  
Processing points  
Elapsed time: 920 ms  
Segments: 29,976  
Triangles: 19,977  
Convex hull: 21 points  
Parabola intersections: 486,920  
Circle tests: 69943  
BF insert comparisons: 66,012  
BF delete comparisons: 157,462  
Number of priority queue records created: 35,800  
Max BF count: 233  
Max BF depth: 10  
Max PQ count: 129  
Max PQ depth: 9