



According to the plot, the red line is the quadratic function $y = x^2$.

The blue line is result of timing and number of collisions from task 1-10 with normalized to 0-1 range.

In my script, there is a nest loop which outer loop iterate each object from task which is $O(n)$,

The inner loop is iterate with $n-1, n-2, \dots, 1$.

Therefore it should be sub-quadratic.