What is the asymptotic time complexity for brute force algorithm of comparing all pairs of points?

- Compute distance and compare with best so far
- Do this once for each pair of points.
If you've taken CSE 240 or equivalent I hope you can quickly say

\[ C(n,2) = \binom{n}{2} = \frac{n(n-1)}{2} \]

\[ = \frac{n^2}{2} - \frac{n}{2} \]

\[ \leq C \cdot n^2 \]
Otherwise we can compute the number of pairs of points as:

\[
\text{# points it is compared against} = \frac{n(n-1)}{2}
\]

\[
1 + 2 + \cdots + (n-2) + (n-1) = \frac{(n-1)/2 \text{ pairs}}{}
\]