This is CS50
an algorithm

1. stand up and think of the number 1
2. pair off with someone standing, add your numbers together, and adopt the sum as your new number
3. one of you should sit down; the other should go back to step 2
another algorithm

1. stand up if in orchestra section

2. pair off with someone standing; stay standing if you’re taller, sit down if you’re shorter; break tie randomly

3. if still standing, go to step 2
The graph shows a linear relationship between the size of the problem and the time to solve it. The equation for this relationship is $t = \frac{n}{2}$, where $t$ is the time to solve and $n$ is the size of the problem.
The time to solve a problem increases with the size of the problem. For a linear problem, the time increases linearly with $n$. For a problem that can be halved each step, the time increases logarithmically with $n$.
bubble sort
selection sort
to be continued...