

Problem #4

Sorting:

Does the size of p change the analysis and when does 1 sort outperform the other.
The p when sepsis a average of $p = 160$ is when the merge sort goes faster then the select sort.

```
Merge-sorted array: 4599954 operations  
Select-sorted array: 3199920 operations  
  
RUN SUCCESSFUL (total time: 140ms)
```

```
p = 151
Merge sort: 43 milliseconds
Select sort: 39 milliseconds

p = 152
Merge sort: 47 milliseconds
Select sort: 44 milliseconds

p = 153
Merge sort: 44 milliseconds
Select sort: 40 milliseconds

p = 154
Merge sort: 44 milliseconds
Select sort: 40 milliseconds

p = 155
Merge sort: 46 milliseconds
Select sort: 42 milliseconds

p = 156
Merge sort: 43 milliseconds
Select sort: 42 milliseconds

p = 157
Merge sort: 43 milliseconds
Select sort: 44 milliseconds

Point where merge sort wins = 157

RUN SUCCESSFUL (total time: 6s)
```