Timing vs. Number of Squares in Query for Ver 4 and Ver 5

Legend:
- Ver 4 (× marker)
- Ver 5 (● marker)
- Linear (Ver 4)
- Poly. (Ver 5)

X-axis: Number of Squares in Whole Grid
Y-axis: Timing (ms)

The time it takes to complete a query for a certain size grid is plotted in the graph above. These points are averages of 20 iterations of completing a random query within a certain grid size. All parts of the processing, including creating the grid, were included in every iteration. There was also a warmup period before collecting data where there each version was run 30 times. It seems like Version 5 is worse for larger grid sizes than Version 4, as Version 5 seems to have a quadratic line representing the time it will take to complete a query as the squares get larger, while Version 4 seems to only be linear. This seems to make sense as version 4 makes use of the ForkJoin framework, which is better able to portion out large tasks and fully use all resources, while version 5 is bound by only using 4 threads.