|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Load Factor | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.701 | 0.801 | 0.901 |
| Avg # Of Probes for 30 Runs | 1.071429 | 1.214286 | 1.292857 | 1.464286 | 1.678571 | 2.642857 | 2.642857 | 6.571429 | 8.607143 |

Average Number of Probes After 30 Runs for Insert

Using the chart and the numbers to draw a conclusion about Quadratic Probing, we can see that after 30 runs the numbers begin to normalize a bit, showing a steady increase in the amount of probes necessary after 0.1 (Which will always be 1 probe) onwards for each insert. However, this is not linear, but a very slow increase, showing the effective of Quadratic Probing, particularly from 0.1 to 0.5, when rehashing isn’t necessary, which is when Quadratic Probing works best. Afterwards,, however, we see a much more rapid increase, more towards an exponential increase in the amount of probes necessary from 0.7 to 0.9. This is particularly because of the lack of rehashing in this particular Quadratic Probe, and emphasizes that Quadratic Probing works best when the load factor is less than 0.5.