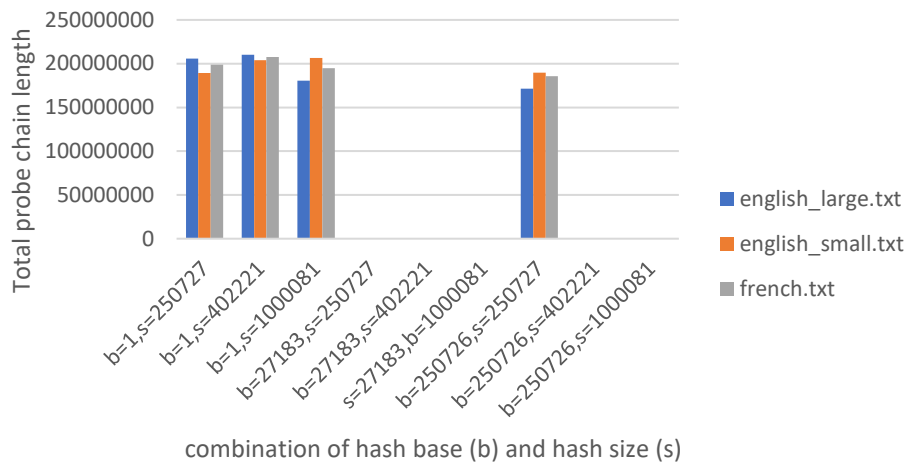
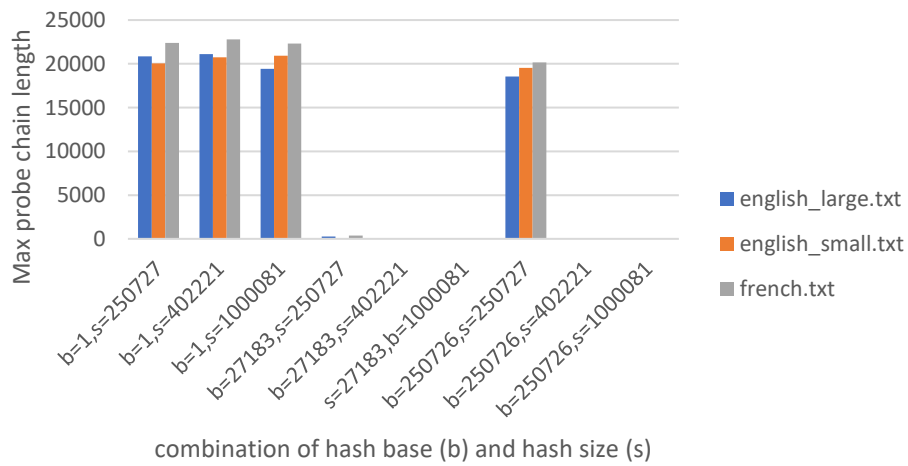
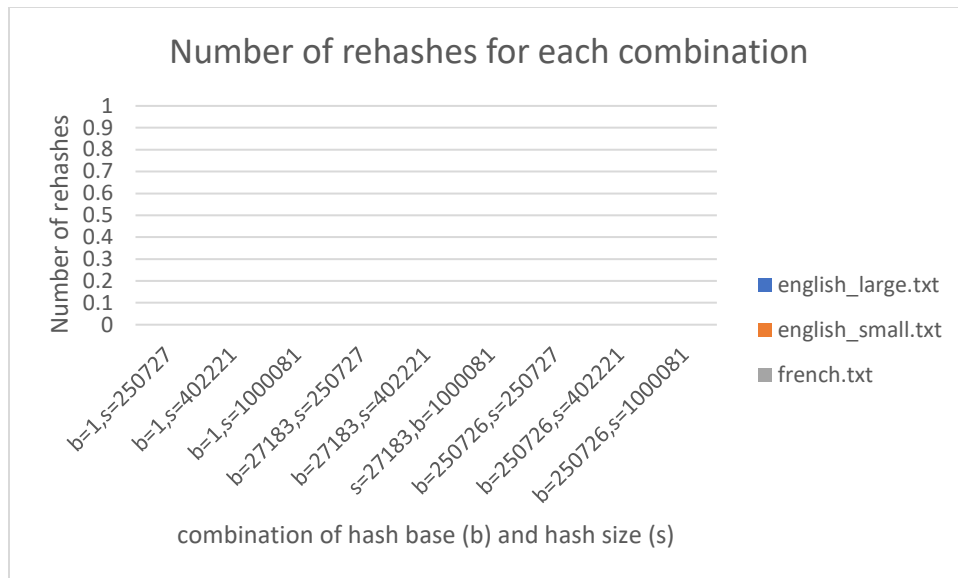


Total probe chain length for each combination



Max probe chain length for each combination





From the data given, it is clear that due to the probe chain lengths increasing for data sets where the base is close to 1 or the size of the hash table, that these values deviate further away from the promise of a time complexity  $O(1)$ , instead you find that they approach a time complexity of  $O(N)$  where  $N$  is the number of elements inserted, this means for each subsequent piece of data, the length taken to insert it will drastically increase. The reason why there are not a lot of collisions appearing for data sets that were unable to finish before 2 minutes is because it could not get through all the data, hence the collisions only count a small portion of what the total collisions for the file may be.

The reason why the number of rehashes always remained 0 for this test is because the data given never exceeded the size of the hash table, hence the check full function always returned false and never called for the rehash.