1. Define "binomial tree".

2. Prove that binomial tree B_k has exactly 2^k nodes.

3. Define "binomial queue".

4. Prove that a binomial queue with N nodes contains node more than $\lceil \log N \rceil$ nodes.

5. Explain how to merge two binomial queues.

6. Explain how to insert an item into a binomial queue.

7. Explain how to delete the minimum item from a binomial queue.

8. Prove that binomial tree B_k has binomial trees $B_0, B_1, \ldots, B_{k-1}$ as children of the root.

9. Show that N inserts into an initially empty binomial queue take $O(N)$ time in the worst case.