1. **Compare the time complexity of linear and binary search.**

**Time Complexity Analysis:**

* **Linear Search:** O(n) because each book is checked one by one.
* **Binary Search:** O(log n) because the list is repeatedly halved.

1. **Discuss when to use each algorithm based on the data set size and order.**

**Linear Search:** Suitable for small or unsorted datasets.

**inary Search:** Suitable for large and sorted datasets due to its efficiency.