1. Hashing. Expected $O(n)$ time.
2. Reduce to integer sorting. After sorting, only need deterministic $O(n)$ time by monotone pointers.
For integer sorting:
$O(n\sqrt{\log\log n})$ randomized [3].
$O(n \log\log n)$ deterministic [2].

3. For the lower bound, $\Omega(n \log n)$ in the degree-d algebraic decision tree model [1]. We can also reduce the set intersection problem to this, i.e. deciding whether two sets $\{x_1, \ldots, x_n\}$ and $\{y_1, \ldots, y_n\}$ intersect, by negating one of the sets.

References

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