

Table 1. The time complexities of the three methods

	ResizableArrayBag			LinkedBag		
	union	intersection	difference	union	intersection	difference
Time Complexity in the Best Case	$O(n)$	$O(n^2)$	$O(n^2)$	$O(n)$	$O(n^2)$	$O(n^2)$
Time Complexity in the Worst Case	$O(n)$	$O(n^2)$	$O(n^2)$	$O(n)$	$O(n^2)$	$O(n^2)$

Explanations:

The implementations for both ResizableArrayBag and LinkedBag use the same code.

- Union
 - Both are $O(n)$ because the program will go through every element once to add them to the resultant bag.
- Intersection
 - Both are $O(n^2)$ because the program will go through each element in the first bag and check every element in the second bag before adding it.
- Difference
 - Both are $O(n^2)$ because the program will add every element in the first bag to the resultant bag, then attempt to remove all elements from the second bag in the first bag, which does so by looking through every element in the first bag.