

Quiz 2

1. (8 points) Write a method:

```
public static <E> boolean searchThreeAway(PositionList<E> list,  
                                         E first, E second)
```

that returns true if both **first** and **second** are in the list with **second** three positions after **first**.

Ex. If **first** is 1 and **second** is 2, we get true for the list [1, 2, 5, 1, 6, 8, 2].

Note: **first** and **second** may appear multiple times in the list!

—

2. (1 point) In Big-*O* notation, for your implementation above, what is the best case asymptotic computation complexity? What is the worst case?

—

3. (1 point) Assume **first** and **second** cannot be repeated in the list, and the list is sorted. Describe in words an efficient implementation of the method above and its worst case asymptotic computational complexity in Big-*O* notation.

—

Bonus (1 point). Do question 3 allowing for repeats of **first** and **second**.