FirstPositionFinder.java

```
1   package BinarySearch;
2
3   public class FirstPositionFinder {
4       public int findFirstPosition(int[] nums, int target) {
5   1       int low = 0, high = nums.length - 1;
6           int firstPosition = -1;
7
8   2       while (low <= high) {
9   3           int mid = low + (high - low) / 2;
10  1           if (nums[mid] == target) {
11                  firstPosition = mid;
12  1               high = mid - 1;
13  2           } else if (nums[mid] > target) {
14  1               high = mid - 1;
15              } else {
16  1               low = mid + 1;
17              }
18          }
19
20  1       return firstPosition;
21      }
22  }
```

Mutations

5	1. Replaced integer subtraction with addition → KILLED
8	1. negated conditional → KILLED 2. changed conditional boundary → KILLED
9	1. Replaced integer addition with subtraction → KILLED 2. Replaced integer division with multiplication → KILLED 3. Replaced integer subtraction with addition → KILLED
10	1. negated conditional → KILLED
12	1. Replaced integer subtraction with addition → TIMED_OUT
13	1. negated conditional → KILLED 2. changed conditional boundary → SURVIVED
14	1. Replaced integer subtraction with addition → TIMED_OUT
16	1. Replaced integer addition with subtraction → TIMED_OUT
20	1. replaced int return with 0 for BinarySearch/FirstPositionFinder::findFirstPosition → KILLED

Active mutators

- CONDITIONALS_BOUNDARY
- EMPTY_RETURNS
- FALSE_RETURNS
- INCREMENTS
- INVERT_NEGS
- MATH
- NEGATE_CONDITIONALS

- NULL_RETURNS
- PRIMITIVE_RETURNS
- TRUE_RETURNS
- VOID_METHOD_CALLS

Tests examined

- BinarySearch.FirstPositionFinderTest.testFirstPosition(BinarySearch.FirstPositionFinderTest) (0 ms)

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