

Four Possibilities for Two Conditions

```
for (j = 0; u[i] - a > j; j++) {
    printf ("X");
}
if ((num - 1) > i && 0 != u[i]) {
    printf (".");
}
```

There are four possibilities for these two conditions.

How Many Cases Does Test #2 Cover?

Test #2: 1 3 0 0 7

num - 1 > i	0 != u[i]	Test #2?
false	false	regions 3 & 4
false	true	region 2
true	false	not covered
true	true	region 1

We Need to Add One More Test

7. A zero region with index (0, 1, 2, 3) less than the number of non-zero regions - 1.

We can't make the first region zero-length,

- so the region index must be at least 1,
- and the number of non-zero regions must be at least 3.

Let's make a tight fit (a corner case), too...

Test #3: 1 0 2 3 8, which should
print "x.xx.xxx\n".

Let's Try the Code on Our Coverage Tests

Let's try the last test...

Test #1: 1 2 3 4 12, which should fail.

Test #2: 1 3 0 0 7, which should
print "...X..\n".

Test #3: 1 0 2 3 8, which should
print "x.xx.xxx\n".

The code fails the third test!