Solution for "Speeding Ticket" Bronze December 2015

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Since the road has a maximum length of 100, make an array of size 100 to keep track of the speed limit at each mile. After constructing the array, read in the segments of Bessie's trips. For every mile of Bessie's trip, compare her speed to the speed limit and take the maximum difference.

Here's an array keeping track of the speed limits

Distance	0	...	39	40	...	90	...	99
Speed Limit	75	...	75	35	...	45	...	45

In the interval [0, 40), Bessie travels at 76, exceeding the speed limit by 1
In the interval [40, 60), Bessie travels at 30, which is under the speed limit
In the interval [60, 90), Bessie travels at 40, exceeding the speed limit by 5
In the interval [90, 100), Bessie travels at 40, which is under the speed limit

The answer is therefore 5.

```
array limits[100]
read N, M

index = 0
for i from 0 to N - 1:
    read a, b
    for j from 0 to a - 1:
        limits[index] = b
        index += 1

index = 0
diff = 0
for i from 0 to M - 1:
    read a, b
    for j from 0 to a - 1:
        diff = max(diff, b - limits[index])
        index += 1
print diff
```