Lab 1.1

2: "item found" was produced. Yes, it was expected.

3: "item not found" was produced. Yes, this was expected.

Yes, at this point I feel confident the program is correct because the items that were to be searched for were either found or not found correctly.

4: 1 2 3 entered 10, item not found

4 5 6 entered 5, item not found

7 8 9 entered 4, item not found

I find the program is incorrect at this point

5: No, it does not appear correct. Even when item is found inside the matrix, it continues to search for the item, and unless item is also the last unit in the matrix, it will be found false. Basically, it will continue searching and overwrite the found item with false.

6: item 77

statement:1 row: ? col: ? mat[row][col]:? found: ?

statement:2 row: ? col: ? mat[row][col]:? found: ?

statement:3 row: 0 col: 0 mat[row][col]:45 found: ?

statement:4,7 row: 0 col: 0 mat[row][col]:45 found: false

statement:3 row: 0 col: 1 mat[row][col]:77 found: false

statement:4,5 row: 0 col: 1 mat[row][col]:77 found: true

statement:3 row: 0 col: 2 mat[row][col]:93 found: false

statement:4,7 row: 0 col: 2 mat[row][col]:93 found: false

statement:2 row: 1 col: 2 mat[row][col]:93 found: false

statement:3 row: 1 col: 0 mat[row][col]:78 found: false

statement:4,7 row: 1 col: 0 mat[row][col]:78 found: false

statement:3 row: 1 col: 1 mat[row][col]:79 found: false

statement:4,7 row: 1 col: 1 mat[row][col]:79 found: false

statement:3 row: 1 col: 2 mat[row][col]:85 found: false

statement:4,7 row: 1 col: 2 mat[row][col]:85 found: false

statement:2 row: 2 col: 2 mat[row][col]:85 found: false

statement:3 row: 2 col: 0 mat[row][col]:72 found: false

statement:4,7 row: 2 col: 0 mat[row][col]:72 found: false

statement:3 row: 2 col: 1 mat[row][col]:96 found: false

statement:4,7 row: 2 col: 1 mat[row][col]:96 found: false

statement:3 row: 2 col: 2 mat[row][col]:77 found: false

statement:4,5 row: 2 col: 2 mat[row][col]:77 found: true

7: item 45

statement:1 row: ? col: ? mat[row][col]:? found: ?

statement:2 row: ? col: ? mat[row][col]:? found: ?

statement:3 row: 0 col: 0 mat[row][col]:45 found: ?

statement:4,5 row: 0 col: 0 mat[row][col]:45 found: true

statement:3 row: 0 col: 1 mat[row][col]:77 found: false

statement:4,7 row: 0 col: 1 mat[row][col]:77 found: false

statement:3 row: 0 col: 2 mat[row][col]:93 found: false

statement:4,7 row: 0 col: 2 mat[row][col]:93 found: false

statement:2 row: 1 col: 2 mat[row][col]:93 found: false

statement:3 row: 1 col: 0 mat[row][col]:78 found: false

statement:4,7 row: 1 col: 0 mat[row][col]:78 found: false

statement:3 row: 1 col: 1 mat[row][col]:79 found: false

statement:4,7 row: 1 col: 1 mat[row][col]:79 found: false

statement:3 row: 1 col: 2 mat[row][col]:85 found: false

statement:4,7 row: 1 col: 2 mat[row][col]:85 found: false

statement:2 row: 2 col: 2 mat[row][col]:85 found: false

statement:3 row: 2 col: 0 mat[row][col]:72 found: false

statement:4,7 row: 2 col: 0 mat[row][col]:72 found: false

statement:3 row: 2 col: 1 mat[row][col]:96 found: false

statement:4,7 row: 2 col: 1 mat[row][col]:96 found: false

statement:3 row: 2 col: 2 mat[row][col]:77 found: false

statement:4,7 row: 2 col: 2 mat[row][col]:77 found: false

8: The search will output the bool result of the last number, mat[3][3], in the matrix.

9: check

10: For the if statement, I added **return** to found = true, which then will stop the loops and the search as soon as the item has been found, which cuts down on executions since the item was found.