AP® COMPUTER SCIENCE A
GENERAL SCORING GUIDELINES

Apply the question assessment rubric first, which always takes precedence. Penalty points can only be deducted in a part of the question that has earned credit via the question rubric. No part of a question (a, b , c) may have a negative point total. A given penalty can be assessed only once for a question, even if it occurs multiple times, or in multiple parts of that question. A maximum of 3 penalty points may be assessed per question.

1-Point Penalty

(w) Extraneous code that causes side effect (e.g., printing to output, incorrect precondition check)
(x) Local variables used but none declared
(y) Destruction of persistent data (e.g., changing value referenced by parameter)

Mr Lee's 1-Point Penalty:

- Inefficient, "long winded" or "messy" difficult to understand code which takes longer to write than standard more efficient solutions.
    - In an exam you need to save time by writing quickly hand writable efficient code which is easy for AP readers to understand.

No Penalty

- Extraneous code with no side effect (e.g., precondition check, no-op)
- Spelling/case discrepancies where there is no ambiguity*
- Local variable not declared provided other variables are declared in some part
- Keyword used as an identifier
- Common mathematical symbols used for operators (x • ÷ ≤ ≥< > ≠)
- `=` instead of `==` and vice versa
- Missing `{}` where indentation clearly conveys intent
- Missing `()` around `if` conditions

** Spelling and case discrepancies for identifiers fall under the "No Penalty" category only if the correction can be unambiguously inferred from context; for example, "total" instead of "totl". As a counterexample, that if the code declares "int G=99 , g=O; ", then uses "while (G < 10) " instead of "while (g < 10) ", the context does not allow for the reader to assume the use of the lower-case variable.*

2D Arrays – Crossword FRQ

A crossword puzzle grid is a two-dimensional rectangular array of black and white squares. Some of the white squares are labeled with a positive number according to the *crossword labeling rule*.

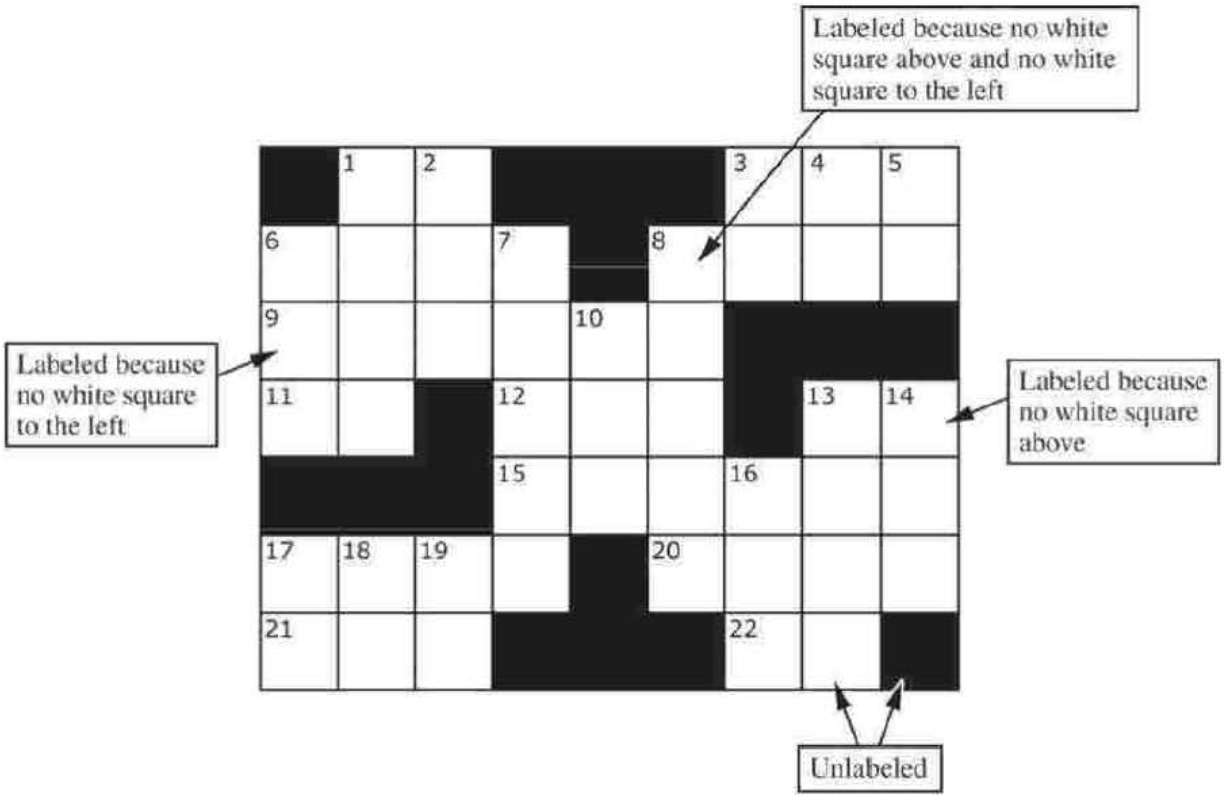
The crossword labeling rule identifies squares to be labeled with a positive number as follows.

A square is labeled with a positive number if and only if

- the square is white and
- the square does not have a white square immediately above it, or it does not have a white square immediately to its left, or both.

The squares identified by these criteria are labeled with consecutive numbers in row-major order, starting at 1.

The following diagram shows a crossword puzzle grid and the labeling of the squares according to the crossword labeling rule.



Write a code segment that prints the `boolean` value `true` if the square indexed by row `r`, column `c` in the crossword puzzle grid should be labeled with a positive number according to the crossword labeling rule; otherwise it prints the `boolean` value `false`. The parameter `blackSquares` indicates which squares in the crossword puzzle grid are black.

```
/** Prints true if the square at row r, column c should be labeled
 *  with a positive number: false otherwise.
 *  The square at row r, column c is black if and only if
 *  blackSquares[r][c] is true.
 *  Precondition: r and c are valid indexes in blackSquares.
 */
int r, c;
boolean[][] blackSquares;
```

Testing code:
https://www.jdoodle.com/a/2GFb