

AP[®] COMPUTER SCIENCE A

2013 SCORING GUIDELINES

Question 2: TokenPass

Part (a)	<code>TokenPass</code> constructor	4 points
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Intent: *Create `TokenPass` object and correctly initialize game state*

- +1 Creates instance variable `board` as `int` array of size `playerCount`
- +1 Computes a random number between 1 and 10, inclusive, and a random number between 0 and `playerCount-1`, inclusive
- +1 Initializes all entries in `board` with computed random value (*no bounds errors*)
- +1 Initializes instance variable `currentPlayer` to computed random value

Part (b)	<code>distributeCurrentPlayerTokens</code>	5 points
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Intent: *Distribute all tokens from `currentPlayer` position to subsequent positions in array*

- +1 Uses initial value of `board[currentPlayer]` to control distribution of tokens
- +1 Increases at least one `board` entry in the context of a loop
- +1 Starts distribution of tokens at correct board entry
- +1 Distributes next token (if any remain) to position 0 after distributing to highest position in board
- +1 On exit: token count at each position in `board` is correct

Question-Specific Penalties

- 2 (v) Consistently uses incorrect array name instead of `board`
- 1 (y) Destruction of persistent data (`currentPlayer`)
- 1 (z) Attempts to return a value from `distributeCurrentPlayerTokens`