# AP® COMPUTER SCIENCE A
## 2018 SCORING GUIDELINES

### Question 1: Frog Simulation

<table>
<thead>
<tr>
<th>Part (a)</th>
<th>5 points</th>
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**Intent:** Simulate the distance traveled by a hopping frog

- **+1** Calls `hopDistance` and uses returned distance to adjust (or represent) the frog’s position
- **+1** Initializes and accumulates the frog’s position at most `maxHops` times *(must be in context of a loop)*
- **+1** Determines if a distance representing multiple hops is at least `goalDistance`
- **+1** Determines if a distance representing multiple hops is less than starting position
- **+1** Returns `true` if goal ever reached, `false` if goal never reached or position ever less than starting position

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<th>Part (b)</th>
<th>4 points</th>
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**Intent:** Determine the proportion of successful frog hopping simulations

- **+1** Calls `simulate` the specified number of times *(no bounds errors)*
- **+1** Initializes and accumulates a count of `true` results
- **+1** Calculates proportion of successful simulations using `double` arithmetic
- **+1** Returns calculated value