

# AP<sup>®</sup> COMPUTER SCIENCE A 2010 SCORING GUIDELINES

## Question 1: Master Order

<b>Part (a)</b>	getTotalBoxes	<b>3 points</b>
-----------------	---------------	-----------------

**Intent:** Compute and return the sum of the number of boxes of all cookie orders in this.orders

- +1 Considers all CookieOrder objects in this.orders
  - +1/2 Accesses any element of this.orders
  - +1/2 Accesses all elements of this.orders with no out-of-bounds access potential
- +1 1/2 Computes total number of boxes
  - +1/2 Creates an accumulator (declare and initialize)
  - +1/2 Invokes getNumBoxes on object of type CookieOrder
  - +1/2 Correctly accumulates total number of boxes
- +1/2 Returns computed total

<b>Part (b)</b>	removeVariety	<b>6 points</b>
-----------------	---------------	-----------------

**Intent:** Remove all CookieOrder objects from this.orders whose variety matches cookieVar; return total number of boxes removed

- +4 Identifies and removes matching CookieOrder objects
  - +1/2 Accesses an element of this.orders
  - +1/2 Compares parameter cookieVar with getVariety() of a CookieOrder object (must use .equals or .compareTo)
  - +1 Compares parameter cookieVar with getVariety() of all CookieOrder objects in this.orders, no out-of-bounds access potential
  - +1/2 Removes an element from this.orders
  - +1/2 Removes only matching CookieOrder objects
  - +1 Removes all matching CookieOrder objects, no elements skipped
- +1 1/2 Computes total number of boxes in removed CookieOrder objects
  - +1/2 Creates an accumulator (declare and initialize)
  - +1/2 Invokes getNumBoxes on object of type CookieOrder
  - +1/2 Correctly accumulates total number of boxes (must be in context of loop and match with cookieVar)
- +1/2 Returns computed total

**Usage:**

- 1 consistently references incorrect name instead of orders, of potentially correct type
- 1 1/2 consistently references incorrect name instead of orders, incorrect type (e.g., this, MasterOrder)