Free response questions from past AP-test:

A reminder

Subjects are usually one (or more) of:

1D array, 2D array, ArrayList, Multiple classes, Design a class: Inheritance, Design a class: Interface, Strings.

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| 2017 | | |
| Q2 – **Mult practice** | Design and Build a class.  Write complete class and implement interface.  MultPRactice, getPRoblem, nextPRoblem | Creating problems for practice. The interface defined TWO functions to be implemented.  Key word: **implements** |
| Q3 – **Phrase** | String.  Modifying and manipulating String (phrase).  FindNthOccurence  ReplaceNthOccurence | Must use the ‘Nth’ occurrence function!! |
| Q4 – **Position** | 2D array of values.  findPosition  getSuccessorArray | The successor artray was an array of Objects (Position objects).  Must use findPosition. |

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| 2016 | | |
| Q1 – **Random String Choose** | ArrayList (from Array)  Random number  Write complete class and subclass constructor | In the subclass, use  super(with arguments).  ONE line solution to part b. |
| Q2 – **Log Messages** | String manipulation, ArrayList  Log message. Parsing these. | Trick of adding spaces at the beginning/end of Strings!!  “.. needs to be at the beginning or preceded by a space.”  return (" " + description + " ").indexOf(" " + keyword + " ") >= 0; |
| Q3 – **CrossWord** | 2D array (Booleans)  toBeLabeled : One long Boolean line…  return !blackSquares[r][c] &&  (r == 0 || blackSquares[r-1][c] || c == 0 || blackSquares[r][c-1]); | 2D array of objects: Square. Need to be initialized new Square().  if (toBeLabeled(r, c, blackSquares)){  puzzle[r][c] = new Square(false, num);  num++;  }  else  puzzle[r][c] = new Square(blackSquares[r][c], 0);  } |
| Q4 – **StringFormatter** | ArrayList, String manipulations, calculations (gaps etc). | A lot of CODE! Space before, after, and putting it together. |

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| 2014 | | |
| Q3 – **Seating Chart** |  |  |
| Q4 – **Trio** | Design a class: Interface | \* Using Interface MenuItem to refer to all items.  \* Minimum price among three objects. |

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| 2013 | | |
| Q1 – **Song list** |  | \* updateDownloads() |
| Q3 - **Manga** |  |  |
| Q4 – **Sky View** |  |  |