Objectives: Practice declaring arrays, populating the arrays.

Problem: Mary is an elementary school teacher and has asked you to create a program so that the student can take Math quizzes. Each student should answer 5 random math questions. The program keeps track of the score of each student and displays the score at the end of the quiz. The questions will be displayed one at a time and the student will be given the chance to answer the question. If the student is correct the points will be added to the score else a message will be displayed indicating the incorrect answer. Here is a sample output:

|  |
| --- |
| \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* There are 5 questions in this quiz. You get certain points if you answer it correctly let’s take the quiz \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 13 \* 12 = 156 You earned 9 points 11 \* 5 = 55 You earned 5 points 6 / 5 = 0 Incorrect answer 10 - 5 = 5 You earned 2 points 14 - 9 = 6 Incorrect answer Your score is: 16  Do you want to take the quiz again? yes  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* There are 5 questions in this quiz. You get certain points if you answer it correctly  let’s take the quiz \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 9 - 9 = 0 You earned 7 points 9 \* 11 = 99 You earned 6 points 8 - 12 = -4 You earned 3 points 11 / 12 = 0 You earned 4 points 11 + 8 = 20 Incorrect answer  Your score is: 20 Do you want to play again? No  Good bye |

# Required methods

**public static void main():**calls the method prep

**public static void prep():** The pseudocode for this method is given

**public static void populate(String[] quiz, int[] answer, int[] points, int max, int min):** this method should populate the three arrays with questions, correct answers and the points for each question.

After the first run of my code the three arrays were populated:

Index: 0 1 2 3 4

Quiz: [**15** \* 10, 11 - 13, 12 + 16, 9 + 16, 15 \* 19]

answer: [**150**, -2, 28, 25, 285]

Points : [**4**, 6, 4, 8, 2]

The question at index zero is: 15 \* 10, the answer at index zero is 150 and the points for the questions is 4

Since the array of quiz is being populated randomly so the three arrays will be populated differently each time

Second run of my populate method:

quiz: [10 + 15, 15 - 17, 17 - 10, 13 \* 8, 15 / 9]

answer: [25, -2, 7, 104, 1]

points: [9, 9, 7, 5, 6]

Here is the third run of my method populate:

quiz: [10 - 9, 11 - 8, 14 + 14, 8 - 13, 12 \* 10]

answer: [1, 3, 28, -5, 120]

points: [2, 4, 1, 6, 8]

**public static int calculate (int num1, char op, int num2):** the code for this method is given  
  
  
  
**public static int test(String[] questions, int[] answers, int[] values):** the pseudocode for this method is given. This method displays one question at the time. Asks the user for the answer. Add the points to the score if the answer was correct.