**20th May 2025(Problem 2)**

**Problem Statement:**

A student appears for a multiple-choice exam consisting of several questions. The student receives a score based on the number of correct and incorrect answers. Each correct answer awards the student 4 points, while for each wring answer -1 is awarded. Given the total number of questions in the exam and the student's total score, determine how many questions the student answered correctly and how many they answered incorrectly.

**Inputs:**

* **An integer totalQs** — the total number of questions in the exam.
* **An integer score** — the student's total score after completing the exam.

**Output:**

* Return the total number of correct and incorrect answers the student provided.

**Constraints:**

* **1 ≤ totalQs ≤ 1000**  
  (The total number of questions in the exam can be as large as 1000.)
* **-5000 ≤ score ≤ 4000**  
  (The score can range from a large negative value if the student answers most questions incorrectly, to a positive value if the student answers more correctly than incorrectly.)

**Example:**

**Input 1:**

totalQs = 10

score = 20

**Output 1:**

Total number of incorrect questions: 2

Total number of correct questions: 8

**Explanation:**

* The student answered 8 questions correctly and 2 questions incorrectly. This gives a score of 8×4−2×5=20.

**Source Code-**

import java.util.\*;

public class CorrectIncorrectQs {

    public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);

        System.out.println("Please Enter the total number of questions: ");

        int totalQs = sc.nextInt();

        System.out.println("Please Enter the score: ");

        int score = sc.nextInt();

        int allCorrect = totalQs \* 4;

        int temp = allCorrect - score;

        int incorrect = temp / (5); // Note- since -1 is aswarded so total loss = 4 + 1 = 5

        int correct = totalQs - incorrect;

        System.out.print("Total number of incorrect questions: ");

        System.out.println(incorrect);

        System.out.print("Total number of correct questions: ");

        System.out.println(correct);

    }

}  
  
**Complexities of the solution-**

|  |  |
| --- | --- |
| Time Complexity | O(1) |
| Space Complexity | O(1) |