**Siena College’s 35th Annual High School Programming Contest**

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##### **March 31, 2023**

###### Gold Problem #3: Dicey not Yahtzee

Background Information: Dicey is a game played with five dice. It’s similar to the commercially available game called Yahtzee in that a player rolls five dice. The major difference is that the player only rolls one time. The following table shows the possible results and scoring.



| **Roll Type** | **Description and Scoring** | **Examples**  **Rolls & Scores** | |
| --- | --- | --- | --- |
| Five of a Kind | All five dice show the same number..  Score is 1000 + the sum of all the dice. | 6 6 6 6 6 1030  3 3 3 3 3 1015 | |
| Four of a Kind | Four of the dice show the same number.  Score is 600 + the sum of the four matching dice. | 5 5 2 5 5 620  3 1 1 1 1 604 | |
| Full House | Three dice show the same number and the other two dice show the same number.  Score is 400 + the sum of all the dice. | 4 4 4 5 5 422  3 2 3 2 2 412 | |
| Three of a Kind | Exactly three dice show the same number and the other two show different numbers.  Score is 300 + the sum of the three matching dice. | 2 3 2 4 2 306  5 5 1 6 5 315 | |
| Two Pair | Two of the dice show the same number, two of the other dice show the same number but a different one than the first pair, and the remaining die has a different number than the numbers of the two pairs.  Score is 200 + the sum of the four dice showing the pairs. | 1 2 3 2 1 206  6 6 1 5 5 222 | |
| One Pair | Two of the dice have the same number and the remaining three dice have different numbers from each other and the number for the pair.  Score is 100 + the sum of the paired dice. | 4 5 3 1 4 108  1 2 3 5 5 110 | |
| Straight | When arranged in order dice show the values 1, 2, 3, 4, 5 OR the values 2, 3, 4, 5, 6  Score is 500 + the sum of the numbers on all five dice. | 4 3 5 6 2 520  1 2 3 4 5 515 | |
| Nothing | All of the dice show different values and the roll is not a Straight.  Score is just the sum of all five dice. | 1 2 3 6 5 17 | |

Write a program that inputs five integers between 1 and 6 and outputs the Dicey Score based on the scoring rules in the table above.

###### Programming Problem:

Input:  Five integers between 1 and 6 **each on a separate line, not as shown below to save paper.**

Output: The Dicey score for the input values based on the rules in the table above.

Example 1: Example 2: Example 3:

Input: 6 6 6 6 6 Input: 3 2 3 2 3 Input: 1 2 3 6 5

Output: 1030 Output: 413 Output: 17

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