

Code Output Screenshots

Part A Output:

```
● (/Users/singhtanmay345/pytorch-gpu/env) singhtanmay345@Tanmays-MacBook-Air Securin_Assignment % python PartA_Solution.py
The total possible combinations are: 36

The combination matrix is given by:
[[ (1, 1), (1, 2), (1, 3), (1, 4), (1, 5), (1, 6)], [(2, 1), (2, 2), (2, 3), (2, 4), (2, 5), (2, 6)], [(3, 1), (3, 2), (3, 3), (3, 4),
(3, 5), (3, 6)], [(4, 1), (4, 2), (4, 3), (4, 4), (4, 5), (4, 6)], [(5, 1), (5, 2), (5, 3), (5, 4), (5, 5), (5, 6)], [(6, 1), (6,
2), (6, 3), (6, 4), (6, 5), (6, 6)]]

The probabilities of all possible sums occurring among the number of combinations are:
P(Sum = 2) = 0.0278
P(Sum = 3) = 0.0556
P(Sum = 4) = 0.0833
P(Sum = 5) = 0.1111
P(Sum = 6) = 0.1389
P(Sum = 7) = 0.1667
P(Sum = 8) = 0.1389
P(Sum = 9) = 0.1111
P(Sum = 10) = 0.0833
P(Sum = 11) = 0.0556
P(Sum = 12) = 0.0278
```

Part B Output:

```
● (/Users/singhtanmay345/pytorch-gpu/env) singhtanmay345@Tanmays-MacBook-Air Securin_Assignment % python PartB_Solution.py
Enter die A: 1,2,3,4,5,6
Enter die B: 1,2,3,4,5,6
New_Die_A = [1, 2, 2, 3, 3, 4]
New_Die_B = [1, 3, 4, 5, 6, 8]
```