1. **Calculate the Probability of all Possible Sums occurring among the number of combinations from (2). Example: P(Sum = 2) = 1/X as there is only one combination possible to obtain Sum = 2. Die A = Die B = 1.**

**Explanation:**

The first print statement introduces the next output section. Last for loop calculates and prints the probability of each possible sum from 2 to 12. It uses the counts stored in the sum\_count dictionary and divides them by the total number of combinations to obtain the probability. The results are printed in a formatted way, showing the probability for each sum. The probability is calculated as the count of occurrences of a sum divided by the total number of combinations. The: .2f in the formatting string ensures that the probability is displayed with two decimal places.

**Code:**

faces = [1, 2, 3, 4, 5, 6]

total = len(faces) \*\* 2

print("\nProbability of Sums:")

sum\_count={}

combinations = []

for i in range(1,7):

for j in range(1,7):

combinations.append(["Die A:" + str(i) ,"Die B:"+str(j)])

if i+j not in sum\_count:

sum\_count[i+j]=1

else:

sum\_count[i+j]+=1

for s in range(2, 13):

probability = sum\_count[s] / total

print(f"P(Sum = {s}): {sum\_count[s]}/{total} = {probability:.2f}")

**Output:**

