**DOOMED DICE PROBLEM:**

**PART A**

1. Each face of Die A can be paired with each face of Die B. So in order to get the total number of combinations, We just need to multiply the number of faces.

Hence,

total combinations = number of faces on Die A \* number of faces on Die B = 6 \* 6 = 36

2. In order to represent the distribution of all possible combination, we can use a 6 \* 6 matrix.

Where (i,j)th entry will represent the combination sum obtained by rolling Die A with value i and rolling Die B with value j.

3. To find the probability of a particular combination of two dice values, We can divide the number of favourable cases by the total number of combinations, that is 36.

For example, probability of getting a sum of 3 is 2/36 since the number of favourable combinations are (1,2) and (2,1) only.

**PART B**