**The Doomed Dice Challenge Part-A**

* Given that the number of dices are 2 which are 6-faced and the numbers on these faces range from 1 to 6
* The number of possibilities for each dice:

DiceA = 6

DiceB = 6

* Given the two dice are thrown simultaneously
* The total number of combinations are: no.of possibilities of A multiplied by No.of possibilities of B

**The total no.of combinations possible = 6\*6 = 36**

* Values Distribution (S):

(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)

* Calculate the no.of combinations with the individual sum

N(sum=2)=1

N(sum=3)=2

N(sum=4)=3

N(sum=5)=4

N(sum=6)=5

N(sum=7)=6

N(sum=8)=5

N(sum=9)=4

N(sum=10)=3

N(sum=11)=2

N(sum=12)=1

* Probabilities for each sum to be the outcome:

P(sum=2) = 1/36 = 0.0278

P(sum=3) = 2/36 = 0.0556

P(sum=4) = 3/36 = 0.0833

P(sum=5) = 4/36 = 0.1111

P(sum=6) = 5/36 = 0.1389

P(sum=7) = 6/36 = 0.1667

P(sum=8) = 5/36 = 0.1389

P(sum=9) = 4/36 = 0.1111

P(sum=10) = 3/36 = 0.0833

P(sum=11) = 2/36 = 0.0556

P(sum=12) = 1/36 = 0.0278

