Puzzle – 05

Q- Head Shot Puzzle

A lady got kidnapped by a gangster. The Gangster puts two bullets in consecutive order in an empty six-round revolver, spins it, points it at her head and shoots. She is still alive. The Gangster then asked her, "Do you want me to spin it again and fire or pull the trigger again right away?" Q. Which option should be preferred? For each option, what is the probability that she'll be shot?

My Approach and Solution –

There are six ways in which the first bullet would have been fired i.e. :{x denotes blank and b denotes a Bullet}

1. [x   x   x   x   B   B]
2. [x   x   x   B   B   x]
3. [x   x   B   B   x   x]
4. [x   B   B   x   x   x]
5. [B   B   x   x   x   x]
6. [B   x   x   x   x   B]

But as the first shot fire dwas blank so possibility number 5 and 6 are eliminated, in the remaining possibilities if she chooses to pull the trigger right away then the chances of her getting shot are 1{possibility number 4} in 4{total possibilities} i.e, Probability of her dying = ¼ = **0.25**

But, if she chooses to spin the round again, then the possibility of her dying will be 2{possibility number 5 and 6} out of 6{total possibilities} i.e, Probability of her dying will be 2/6 = **0.33**

Here, we can clearly see that the probability of the lady dying on the next shot is low in the case she asks the gangster to **pull the trigger right away**.