**Answer on Question #37775 ,Math, Combinatorics**

*There are 12 UFC fights on. If I were to make one accumulated bet for all the 12 fights, how many accumulated bets must I make to bet on every single possible outcome. e. g. If I were to bet on all my favourites to win out of the 12 matches that would be one accumulated bet, if I were to bet on all the underdogs to win that would be two bets etc. etc.*

## Solution.

Let's look at the bet for a single fight. We can bet on the favourite or on the underdog. Thus, there are two possible bets. So, there are two possible bets for first fight, two possible bets for the second fight and so on. For an accumulated bet there is possible number of bets, which is the product of the possible numbers of bets for each fight. So, the answer is $N = 2^{12} = 4096$.

## Answer:

$2^{12} = 4096.$