Recitation - 04

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February 2023

Problem[1]

100 coins are lying flat on a table. 10 of them are heads up and 90 are tails up.You can't see which one is which(Head or Tail cannot be distinguished with bare eyes). How can we split the coins into two piles such that there are same number of heads up in each pile? (Every coin can be flipped once.)

Solution

Make 2 piles and say pile one has h no. of heads and t no. of tails while the other pile will have $10 - h$ heads and $90 - t$ tails. Now we can flip coins of one pile,so lets flip coins of any pile(say 2nd pile) then no. of heads and tails interchange and now no. of heads are $90 - t$ and no. of tails are $10 - h$. Now no. of heads in pile 1 = no. of heads in pile 2.

[1]Puzzle Credits : https://www.geeksforgeeks.org/