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Four The Same |

We have to prove that all the ***four*** coins will end up on the same *side*, either ***heads(H)*** or ***tails(T)***, regardless of the ***position*** of the **coins**. We **must not** see the *side* of the **coins**; the machine will automatically notify us when all the **coins** are on the *same side*. asdfasdfasdf

We assume, ***initially***, all the coins are ***not*** facing the same way. There is *at least* one **adjacent pair of coins** facing opposite sides.

BUILDING THE CONCEPT

We have to force the sides of all the coins to be the same side. We can take this concept as a **binary system** of four. We must force all the sides of the system to be either 0 or 1. Here we can substitute them as either **heads(0)** or **tails(1)**.

SOLUTION

We force all the coins to be heads. Solved in a minimum of 5 steps.
Flip here means, if the coin you see is heads, make it tails and vice versa.

1.Pick an adjacent side.	Make those heads; we are guaranteed to have 2 heads
2.Pick a diagonal.	If heads/heads, do nothing Else, make everything heads Guaranteed 3 heads
3.Pick adjacent side.	If heads/tails then make both heads (Solution) If heads/heads make one tails; guaranteed 2:2 heads/tails
4.Pick adjacent side.	If heads/tails reverse; flip both coins (Guaranteed 2:2 diagonally) If they are the same, flip both coins (Solution)
5. Pick diagonal.	Flip them, now guaranteed to have all the coins on the same side.