MACHINE FIX

We bought a lot of slot machine some years back, however they turned out to be faulty. Coins can be entered into the slot machines and they can have either 0,1 or 2 coins. Whenever we try to enter the 3rd coin into the k(th) machine, all the coins from that machine disappear and one coin appears in the (k+1) th machine. Initially all the machines (numbered 1,2,3…) had no coins. To examine what's going on one of our team members started entering coins into the first machine, however its been 5 years since and he has managed to enter 52369318173468980680928519318 coins. The machines have not started properly functioning but we figured out that the flag can help unlock the machine's secrets.

Let entering I coins refer to state I, so, the number of machines which have different number of coins in state (I-1) and state I equals change(I). The flag is the sum of change(I) where I ranges over {1,2,3……52369318173468980680928519318}.

Example : Let Machine 3 have 0 coins in State 8 and 1 coin in State 9, thus it contributes 1 to change(9).

Let Machine 2 have 0 coins in State 1 and 0 coins in State 2, thus it contributes 0 to change(2).

The flag would be of the format csictf{answer_you_get_from_above}.