



Problem of the Week

Problem E

Coin Bags

Mara has a bag containing 2 gold coins and 2 silver coins. Sharad has a bag containing 2 gold coins, 2 silver coins, and b bronze coins (where $b > 1$). Mara and Sharad each randomly draw two coins from their bag without replacement. Note that drawing two coins *without replacement* means drawing two coins, one after the other, without putting the first coin back in the bag.

If the probability that the two coins are the same colour is the same for Mara and Sharad, determine the value of b .

