



Problem of the Week

Problem E

A Certain Star Would Love This

Billy and Crystal each have a bag containing 9 balls. The balls in each bag are numbered from 1 to 9. Billy and Crystal each remove one ball from their own bag. Let b be the sum of the numbers on the 8 balls remaining in Billy's bag. Let c be the sum of the numbers on the 8 balls remaining in Crystal's bag.

Determine the probability that b and c differ by a multiple of 4.

