



Problem of the Week

Problem C

Lucky Ducks

For a school fundraiser, Percy bought a big box of rubber ducks and wrote prize amounts, in dollars, on the bottom of each rubber duck. The prize amounts were \$5, \$10, \$20, \$50, and \$100. The number of ducks with each prize amount varied so that the total value for all the ducks with each prize amount was always \$500.

Percy then put all the rubber ducks in his school's swimming pool. At the fundraiser, participants used a long net to catch a duck from the pool. They won the amount written on the bottom of the rubber duck, and then they threw the duck back into the pool before the next person's turn. Since the ducks were returned to the pool after they were caught, the chances of winning any particular amount remained the same.

Amir paid \$15 to play the game once. If we assume he randomly selected a duck, what is the probability that Amir won more money than he paid to play the game?

