PROBLEMS ON GAMBLING

II.13 Bill and John make 7 bets, doubling the amount of the bet each time. Bill wins the first, second, third, and last bet while John wins the others. If Bill wins $3 then the amount bet the first time was
(a) $3 (b) $2 (c) $1.50 (d) $0.50 (e) $0.20

III.29 Tom starts with the amount 64 cents and makes 5 bets. On each bet he either wins or loses half of his amount. If he wins 2 of the 5 bets and loses the other 3, then Tom ends with (in cents) (a) 18 (b) 27 (c) 36 (d) 48 (e) depends on the order in which he wins or loses

VI.17 Bill plays roulette 10 times. He bets $1 the first time and thereafter he bets $1 if he won the previous bet, and he doubles the previous bet if he lost the previous bet. Of the ten bets Bill wins 2 times and loses 8 times. The best he can possibly do is (a) lose $32 (b) lose $12 (c) lose $6 (d) break even (e) win $2

VIII.23 Bill and John make 5 successive bets. The first bet is $1 and thereafter if Bill wins the next bet is double the previous bet, and if John wins it is the same as the previous bet. If Bill wins 2 of the 5 bets then the best John and Bill respectively can do is (a) win $6. win $3 (b) win $7, lose $1 (c) win $5, win $3 (d) win $4, lose $6 (e) win $9, break even

IX.9 Bill and John made a series of bets, each bet $1 more than the previous bet. Bill won the first 30 bets, John won the last 20 bets, and they broke even. The amount of the first bet was (a) $0.40 (b) $2.25 (c) $9.50 (d) $15.75 (e) $35.50

X.18 Bill and Tom make a series of bets. The first bet is $1 and thereafter each time Tom wins the bet, it is doubled, and each time Bill wins the bet it is reduced by $1. After three bets the maximum possible value of Bill's net winnings is (a) -1$ (b) $2 (c) $1 (d) $0 (e) $5.