INTRODUCTION

Since this is the first issue of a new academic year, I once more review the ground rules under which this department is conducted.

In each issue I present three regular problems (the first of which is chess, bridge, go, or computer-related) and one “speed” problem. Readers are invited to submit solutions to the regular problems, and three issues later, one submitted solution is printed for each problem; I also list other readers who responded. For example, solutions to the problems you see below will appear in the February/March issue and the current issue contains solutions to the problems posed in May/June. Since I must submit the February/March column in November, you should send your solutions to me during the next few weeks. Late solutions, as well as comments on published solutions, are acknowledged in subsequent issues in the “Other Respondents” section. Major corrections or additions to published solutions are sometimes printed in the “Better Late Than Never” section as are solutions to previously unsolved problems.

For speed problems the procedure is quite different. Often whimsical, these problems should not be taken too seriously. If the proposer submits a solution with the problem, that solution appears at the end of the same column in which the problem is published. For example, the solution to this issue’s speed problem is given below. Only rarely are comments on speed problems published.

There is also an annual problem, published in the January issue of each year; and sometimes I go back into history to republish problems that remained unsolved after their first appearance.

PROBLEMS

OCT 1. Tom Harriman wonders how you can set the contract sitting East after the Heart 2 has been led. Harriman emphasizes that you are expected to find the solution ‘‘at the table’’ so you should not assume that all hands are known to all players.

North
S 10 8 7
H J 8 7
D A 2
C K Q J 3

West		**East**	
S	A J 2	S	Q 9 6
H	K 10 3 2	H	A 6 5
D	10 8 6	D	9 7 5 4
C	9	C	10

South
S K 5 4 3
H Q 9 6
D K Q J 3
C A 2

South	West	North	East
1D	Pass	2C	Pass
2NT	Pass	3NT	Pass
Pass	Pass		

OCT 2. Howard Stern is a coin flipper from way back who likes to see heads. He flips K coins and then picks up all those that show tails and reflips them. He continues reflipping the coins showing tails until all the coins show heads. Given K coins how many (rounds of) flips are needed to have at least a 50% probability of all heads showing? Conversely, if you are going to use N (rounds of) flips (1 flip of K coins and N-1 reflips, with each reflip including all the tails showing), what is the largest number of coins you can start with and still have at least a 50% probability of all heads showing?

OCT 3. Here is one from Nob Yoshigahara that I confess I would never be able to solve. I have added a hint (forgive me, Nob) but still would have trouble. You have a function defined on the integers greater than 1. The first few values are f(2)=2, f(3)=4, f(4)=8, f(5)=16, and f(6)=31. You are to find f(7) and explain f. Editor’s hint: there is some geometry involved.

SPEED DEPARTMENT

Larry Kells has to drive from New York to Seattle (I made the reverse trip in 1972) and wonders what is the fewest number of states that he must drive through.

SOLUTIONS

M/J 1. We begin with a Bridge problem from Tom Harriman.

North

S	K 10 8
H	10 9 8
D	K 9 8 7
C	A 5 2

West

S	A J 9 3
H	J 5
D	A Q J 10
C	Q J 9

East

S	-
H	Q 6 4 3 2
D	6 5 4
C	10 8 7 6 3

South

S	Q 7 6 5 4 2
H	A K 7
D	7 3
C	K 4

West	**North**	**East**	**South**
1D	P	P	1S
P	3S	P	4S
P	P	P	

Opening Lead: Club Q

Bruce Layton found what he considers a fairly straightforward solution. He writes: South needs to lead trump four times from his hand; twice to finesse as deep as possible, once in case West takes the second trump and returns a Heart, burning a hand entry, and once to draw West's last trump. Fortunately he has four entries: two Hearts, the Club King and a Club ruff. If West doesn't lead a Diamond, the first nine tricks go, in some order, 3 trumps for declarer and one for West, two Hearts, two Clubs and a Club ruff for declarer. Either declarer is in South, having just won the Spade Queen, in which case he can lead a Diamond to set up his Diamond King and has one trump left for his 10th trick, or West is on lead with the Spade Ace, and has only Diamonds left to lead. East finally scores a Heart to go with West's Spade Ace and Diamond Ace, but it's a trick shy of setting the contract.

M/J 2. Matthew Fountain wants you to find a pentagon with unequal integer-length sides that can be inscribed in a circle with an integer-length radius.

The following solution is from Wilbur DeHart

Please place figure number 1 here.

M/J 3. A ''jigsaw'' puzzle from Nob. Yoshigahara.

As noted last issue (August/September), the problem as given in May/June had an incorrect diagram. The correct diagram was printed last issue and the problem renamed **A/S 2**. The solution will appear two issues from now with the other **A/S** problems.

OTHER RESPONDERS

Responses have also been received from R. Bart, R. Bishop, R. Giovanniello, M. Goldring, W. Hartford, R. Hess, B. Layton, M. Ionescu, J. Papdopoulos, K. Rosato and E. Sard.

PROPOSER'S SOLUTION TO SPEED PROBLEM

2. Drive through Canada.