

Our home is on a lake 50 miles north of New York, and the birds have returned this past week (I write this in April)—a welcome sign of spring. The morning birdsong is delightful, and with the trees budding and the rhododendrons ready to pop, May should once again be my favorite month.

My older son lives in San Diego, where the weather is basically beautiful all year. He went to MIT but can't imagine living in such "harsh" conditions again. However, as I point out often (to mostly deaf ears), you cannot appreciate spring without winter.

PROBLEMS

J/A 1. Last year we considered a problem in which North-South makes seven spades, and we wondered what was the greatest number of tricks East-West could make in a spade contract (in all cases with best play). Tom Terwilliger asks about a generalization in which we drop the requirement of a grand slam. Again assuming best play, what is the greatest swing in the number of tricks that can occur by having different sides play the hand in the same trump suit? For example, if North-South can make five spades (11 tricks) and East-West can make four spades (three tricks for North-South), the swing would be $11 - 3 = 8$.

J/A 2. Geoffrey Landis was having dinner with five friends. They all raised a toast and clinked glasses. Since their glasses were all the same diameter, at any instant only three could mutually touch at the rims. For six people, having each touch everybody else's glass requires 15 pairwise touches. Can this be done with five three-glass touches? If not, what is the minimum number required? (This is a 2-D problem; the glasses must touch at the rim.)

J/A 3. Nob Yoshigahara sent us this cryptarithmic problem from Kyoko Ohnishi. Replace each letter with a unique digit to give a true statement.

COLOUR
 COLOUR
 COLOUR
 COLOUR
 COLOUR
 COLOUR
 + COLOUR

 RAINBOW

SPEED DEPARTMENT

Walter Cluett has a sentence consisting of a one-letter word followed by a two-letter word, then a three-letter word, etc. Can you match or exceed his effort?

SOLUTIONS

M/A 1. Our bridgemeister, Larry Kells, wants you to make seven hearts against best defense despite one opponent's holding the J97543 of hearts, a side ace, and a guarded side king. Oh, yes—the other opponent has 10 high-card points.

Richard Hess was able to improve on the problem: his "other opponent" has 11 high-card points.

<p>♠ K x ♥ J 9 7 5 4 3 ♦ x x x x ♣ A</p>	<p>♠ A Q ♥ Q 10 8 6 ♦ x x ♣ x x x x x</p>	<p>♠ J x x x ♥ — ♦ K J ♣ H Q J x x x x</p>
	<p>♠ x x x x x ♥ A K 2 ♦ A Q 10 9 8 ♣ —</p>	

North is the declarer, and any lead by East permits the first four tricks to be taken as a spade finesse, a diamond finesse, a spade cash, and a club ruff ending in South's hand. He then cashes three diamonds, producing the following (East's hand is immaterial):

<p>♠ — ♥ J 9 7 5 4 3 ♦ — ♣ —</p>	<p>♠ — ♥ Q 10 8 6 ♦ — ♣ x x</p>	<p>♠ x x x ♥ A K ♦ 8 ♣ —</p>
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The remaining tricks are a high-finessing cross-ruff: spades and diamonds are ruffed by the lowest needed card from North, clubs are ruffed by the A and K by South, and West helplessly under-ruffs each time.

M/A 2. Avi Ornstein (and his friend Fibo) like to play with sequences. Choose an integer $a \geq 2$ and consider the two sequences

$$y_1 = 1 \quad y_2 = a - 1 \quad y_n = a \cdot y_{n-1} - y_{n-2} \quad \text{and}$$

$$x_1 = 1 \quad x_2 = a \quad x_n = a \cdot x_{n-1} - x_{n-2}.$$

How are these two sequences related?
 A number of readers found the relationship $y_n = x_n - x_{n-1}$ experi-