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DUNCAN 1890/ISTOCK

Suit Up!

1. Michael randomly selected 10 playing cards from a standard deck of 52 and made the following observations about his set of 10 cards:

- From the 10 cards, 7.4 is the mean of the values.
- From the 10 cards, 8 is the median of the values.
- The mode suit is diamonds.
- The probability is .2 of randomly selecting a spade.
- The probability is .3 of randomly selecting a club or a 10.
- The probability is 1/3 of randomly selecting a 3 from among the hearts.

Assume the following values: 1 for ace, 11 for jack, 12 for queen, and 13 for king. What could Michael's 10 cards have been?

2. Create 2 more sets that meet the same conditions as Michael's original set of 10 cards. Examine the 3 sets.
   (a) How are they alike?
   (b) How are they different?
   (c) From your analysis, can you create a 4th set that will meet all the conditions more easily than before?

We encourage classroom teachers to pose this problem to your students and share their creative solutions. Please include a brief analysis of the specific strategy; examples of original students' work or high-quality digital images; and your name, the school name and address, and your e-mail address. E-mail submissions to **Sherry L. Bair** at slbair@ilstu.edu, or send to her at Illinois State University, Campus Box 4520, Normal, IL 61790-4520, by **February 15, 2013**. Published solutions will be credited.

(*Solutions on page 255*)

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