

COMBINATORICS  
SEMINAR

*On a problem from Crux Mathematicorum*

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**Abstract:** Suppose you are given four cards, each containing four nonnegative real numbers, written one below the other, so that the sum of the numbers on each card is 1. You are allowed to put the cards in any order you like, then you write down the first number from the first card, the second number from the second card, the third number from the third card, and the fourth number from the fourth card, and you add these four numbers together. What is the smallest interval  $[a, b]$  so that, no matter which cards you are given, there is always an ordering of the cards so that the sum will lie in  $[a, b]$ ? I will give the history of this problem and what I know about it.

Friday, April 17, 2009, 4:00 pm  
Mathematics and Science Center: W301

MATHEMATICS AND COMPUTER SCIENCE  
EMORY UNIVERSITY