

UIUC Department of Mathematics

PROBLEM OF THE WEEK

December 11, 2005

Sums and Products

Two integers in the range $\{2, 3, \dots, 99\}$ are secretly drawn. The sum of the two integers is given to Dr. S, and the product is given to Dr. P. Dr. S and Dr. P, both of whom are excellent mathematicians, then engage in the following short dialogue:

Dr. P: I do not know the two numbers.

Dr. S: I knew that you didn't know the two numbers.

Dr. P: Now I know the two numbers.

Dr. S: Now I know the two numbers.

What were the two numbers drawn?

PROBLEM OF THE WEEK ARCHIVE

<http://www.math.uiuc.edu/~hildebr/pow>