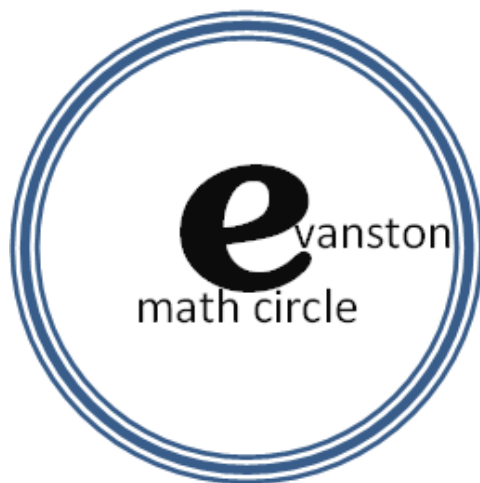


## A New Multiplication

Write down the numbers 1 through 50 on a board. Take two of them, compute their sum and product, and then *add* the resulting sum and product together, and replace the original two numbers on the board with this new number. For instance, if we picked 4 and 11, their sum is 15 and their product is 44, so we would replace 4 and 11 with the single number  $15+44=59$ . Continue this process over and over again until a single number is left on the board. What number do you get? What if you started with more than 50 numbers on the board? We'll explore the math behind this problem, which will lead us to considering new types of "multiplication"! Come join us at the:

## EVANSTON MATH CIRCLE Saturday, December 14



**Northwestern University  
Lunt Hall Room 218, 11:00 AM to 12:30pm**

Math Circle is geared towards eager middle-school students, but students of other ages and backgrounds are welcome as well. More information is available at <http://www.math.northwestern.edu/~scanez/mathcircle/>