

On a 5-by-5 chessboard, place 5 wolves (which can move like queens) and 3 sheep so that all the sheep are safe from the wolves.



#### **Contact Information**

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# 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21... 98 99 100

Pick any two numbers from the list above, say a and b. Remove a and b from the list and instead add to it the number a+b+ab. For example, if you choose to cross 5 and 13 you will replace them by 5+13+5\*13. Continue until there is one number left. What are all possible final numbers?



A free program for middle & high school math teachers or specialists interested in discovering fresh new mathematical ideas and practices.



www.math.utah.edu/teacherscircle



#### About the program

The University of Utah Teachers' Math Circle is an exciting program devoted to broadening the mathematical horizons of middle and high school math teachers and specialists. Based partly on a model developed at the American Institute of Mathematics, the focus will be on open-ended explorations of mathematical techniques and problems, with a view toward potential applications in the classroom.

The topics covered will be carefully selected for their mathematical depth, but also for their accessibility. In particular, no mathematical prerequisites are necessary.

The Teacher's Math Circle will meet eight times during the 2009-2010 academic year. The two-hour meetings will begin with a buffet-style dinner and an opportunity to socialize informally. The plates will be cleared and the mathematics will then begin. Each session will be led by a faculty member in the Department of Mathematics.

## Reasons to join

Joining the Teacher's Math Circle provides a unique opportunity to interact with teachers, specialistists, and mathematicians in a friendly, informal atmosphere. Each

> session will explore new mathematical techniques that either directly or indirectly can be applied to a

classroom setting. The program is completely free of charge.



### Who should attend?

Any middle or high school math teacher or specialist interested in discovering fresh new mathematical ideas and practices.



To apply for the program, fill out an application at:

www.math.utah.edu/teacherscircle

Applications are accepted throughout the year.

### Schedule

All meetings will be on the fourth floor of the LeRoy Cowles Building (LCB) at the University of Utah from 6:15-8:15pm. Free parking is available across campus most days after 6:00pm.

Meeting dates: Wednesday, September 23 Amanda Cangelosi Wednesday, October 21 Aaron Bertram Wednesday, November 18 Emina Alibegovic Wednesday, December 16 Kevin Wortman