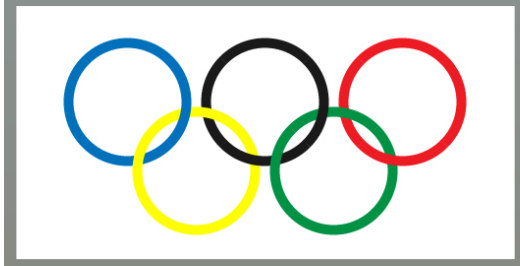
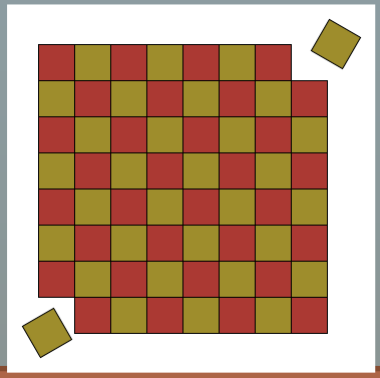
BLACKSBURG MATH CIRCLE

A tuition-free program for mathematically inclined students designed to enhance their appreciation of mathematics and its applications, improving students' problem solving skills and getting them excited about mathematics they are learning.



MUTILATED CHESSBOARD PROBLEM



Suppose a standard 8x8 chessboard has two diagonally opposite corners removed, leaving 62 squares. Is it possible to place 31 dominoes of size 2x1 so as to cover all of these squares?

HOW OFTEN DO WE MEET?

The math circle sessions will be offered weekly, from August to May, on Saturday morning (9:30-11:00 am). For directions and an up - to - date schedule, please visit the circle website.

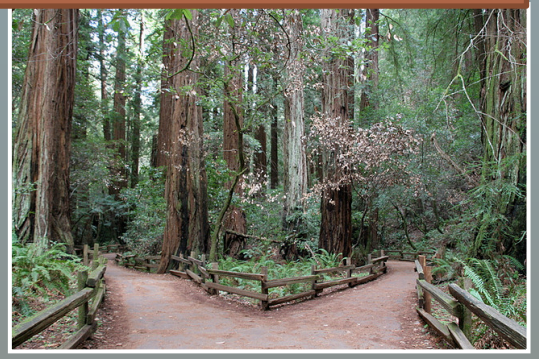
WHERE IS IT LOCATED?

All the VT meetings are in the McBryde Hall, Virginia Tech (featured above) in room 455.

The Department Of **Mathematics** *at Virginia Tech*

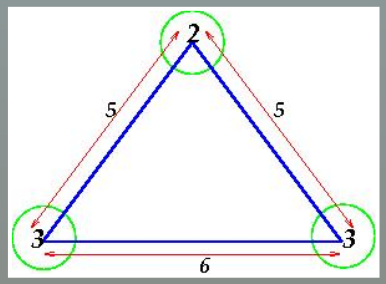
Two players play the following game with a round table and pennies, dimes, and quarters. They take turns placing coins on the table. Last person to put down a coin wins. All coins must lie completely on the table and no coin stacking is allowed. Is there the winning strategy and if yes, for which player?

THE FORK IN THE ROAD



A tourist finds herself on an island inhabited by the two tribes of liars and truth-tellers. Members of one tribe always tell the truth, members of the other always lie. She comes to a fork in a road and has to ask a native bystander which branch she should take to reach a village. She has no way of telling whether the native is a truth-teller or a liar. The tourist can asks one question only. What question can she ask?

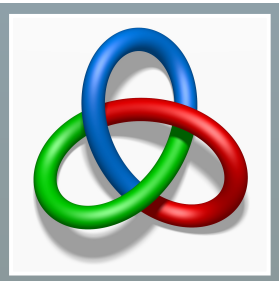
Given an arbitrary triangle, is it possible to place numbers on its vertices so that numbers along each side add up to a total of its length? If yes, how one can choose these numbers?



The Math Circle meetings bring together middle school students and mathematicians or graduate students in an informal setting to work on interesting problems or topics in mathematics, not covered in a typical school curriculum.

For more information check our website

http://www.math.vt.edu/mathcircle



A positive integer is written on a blackboard. Players **A** and **B** play the following game: in each move one has to choose a proper divisor m of the number n written on the blackboard $(1 < m < n)$ and replaces n with $n - m$. Player **A** makes the first move, then players move alternately. The player who can't make a move loses the game. For which starting numbers is there a winning strategy for player **B**?