## MONTHLY MATH HOUR AT UW

## An hour of fun math for middle school students

## Domino tilings and <br>  determinants

## Professor Jon Brundan University of Oregon Department of Mathematics

There are two ways to tile a $2 \times 2$ board with $2 \times 1$ tiles (= or \|). There are thirty six ways to tile a $4 \times 4$ board with $2 \times 1$ tiles (you can check this by listing all the possibilities!).

Question: How many ways are there to tile an $8 \times 8$ board with $2 \times 1$ tiles?
I'll explain a neat way to work this out using some techniques from graph theory and linear algebra --- though no knowledge of that will be assumed in advance. If there's time I'll talk about some other related combinatorial/counting problems.

## UW Seattle campus, Savery Hall, Room 260

 Sunday, March $11^{\text {th }}, 1-2 \mathrm{pm}$This event is part of a series.
Further information, campus maps and driving directions can be found at www.math.washington.edu/~mathcircle/mathhour

