

MAT 364 Extra Credit Homework

Fall 2020

due date: Monday, October 26

Solving the $2 \times n$ Domineering rectangles for $n \leq 13$.

This assignment will count out of 10 points and can be used to replace lowest homework score.

- Write a program to determine the outcome class of a $2 \times n$ domineering game up to $n = 13$ columns, with 2 rows. The program should take the parameter n and print out some readable form of the tree traversal and analysis in order to support the final output which gives the outcome class.
- Make the print out of detailed information about tree traversal an option that can be turned on or off.
- You may use symmetry to eliminate some options. For example, at the beginning of the game on a 2×13 , there are only 7 moves for Left, and only 6 moves for Right, up to isomorphism based on the mirror symmetry about the center vertical line.
- Use the cases for $n < 13$ to test correct output.
- Turn in the program code on Moodle. Also, be prepared to demonstrate the program for me by sharing screen online.