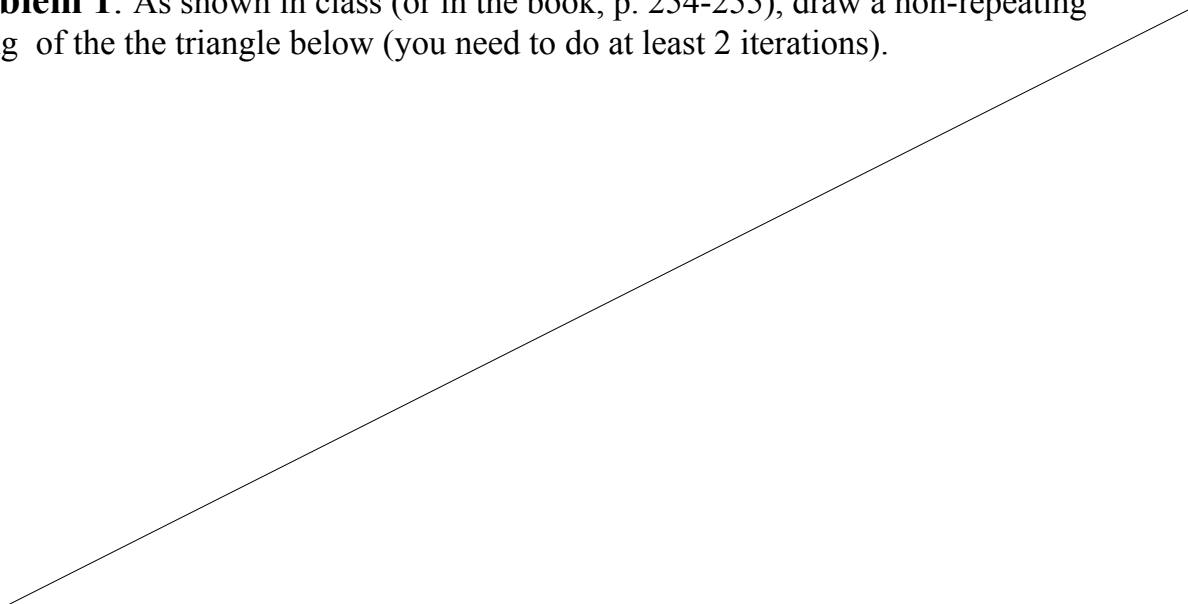


MATH 103 – MATHEMATICAL EXPLORATIONS: HOMEWORK 7
DUE FRIDAY, MARCH 30th (IN CLASS)

Section 4.4. *Can a floor be tiled without any repeating pattern?*

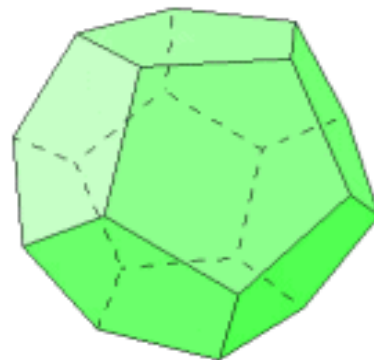
Problem 1. As shown in class (or in the book, p. 254-255), draw a non-repeating tiling of the the triangle below (you need to do at least 2 iterations).



Section 5.4. *Feeling Edgy.*

Problem 2. Find the total number of vertices, edges and faces on a dodecahedron and verify that these numbers satisfy Euler's formula:

$$V - E + F = 2.$$



Problem 3. Count the number of vertices, edges and regions determined by the two graphs below and verify that they satisfy Euler's formula $V - E + R = 2$.

