

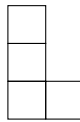
# Homework 2: tilings and colorings

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October 11, 2017

**Problem 1.**

Is it possible to tile an  $8 \times 8$  board with 15  $1 \times 4$  rectangles and 1 L-tetramino?  
L-tetramino looks like this:



**Problem 2.**

At every square of a  $5 \times 5$  board there is a bug. At a certain instant every bug moved to an adjacent square. Is it possible that there is still exactly one bug at each square?

**Problem 3.**

Is it possible to tile a  $5 \times 9$  board with angle trominoes?  
An angle tromino looks like this:

