CS2984: Introduction to Problem Solving, Spring 2008
Homework Assignment 6
Due at 11:00pm on Tuesday, February 26
60 Points

[Revised 2/21]

1. Solve the following cryptoarithmetic problem. The standard rules apply (no leading 0, a given letter is replaced by a digit consistently, etc.).

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  A B C D E
+   B C E D
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  F A D D B
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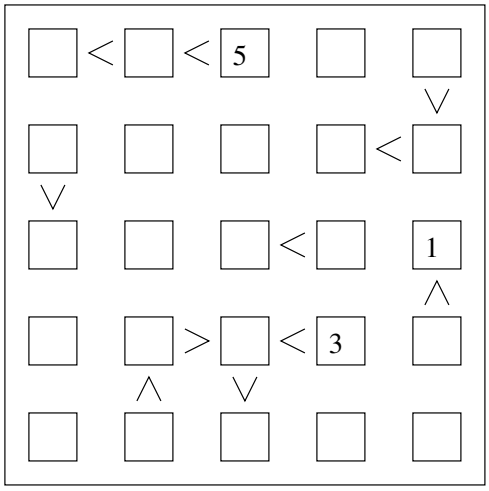
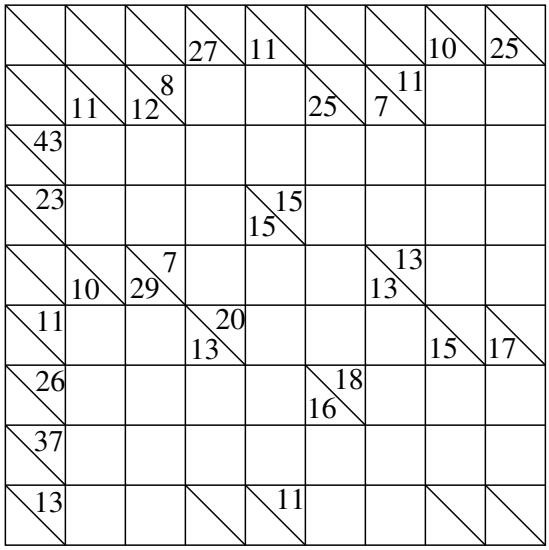
2. The following is a type of puzzle sometimes called a "Futoshiki". Each box is filled with a digit from 1 to 5, such that every row and column contains one of each such digit. The puzzle starts with a few boxes filled in for you. There are also less than (<) and greater than (>) constraints noted on some of the boxes. Fill in the boxes in a way that meets all of these requirements.



3. The following is a type of puzzle sometimes called a "Kakuro" and sometimes called "Cross Sums". Fill in the empty boxes with digits (1-9). The numbers indicate what the adjacent horizontal or vertical boxes must sum to. You may never repeat a digit in any given sum.



4. Below you will see a grid with some "open" (white) squares. Athe bottom, you can see two "pieces", one which is "T" shaped (that covers 4 squares) and one that is a line 4 squares long. The pieces can be rotated, so, in a sense, there are six possible pieces. The problem is to cover all the open squares with copies of the pieces, without overlapping any of the pieces used in the cover.