Experiments in Progress

These are new puzzles that aren't finished yet. You can try them out and let me know what you think.

- **Mirror Donimoes** is a puzzle I designed where pawns walk around on top of the dominoes. (1 player, double-six dominoes, 4 pawns)
- **Adding Donimoes** is a puzzle I designed where you add dominoes in the given order. (1 player, double-six dominoes)

Mirror Donimoes

Help four ghosts find each other in a haunted house. Each domino is a room in the house, and the ghosts can't go through the closed doors. They can go through the mirrors, though. Spooky!

Goal

Move all the pawns into one connected group. Diagonal connections don't count.

Start

Place the dominoes in the starting position shown in the problem, then put a pawn on top of each corner space.

Moves

Each turn, you can make a domino move or a pawn move.

Domino Moves

The house is so spooky, the rooms can move. If a domino has one or two pawns on it, you can slide the domino one space along its long axis. The pawns go along for the ride. You can only move one domino at a time, and all the dominoes must stay connected in one group before and after the move. Diagonal connections don't count.

Remember, a domino with no pawns on it cannot move.

Pawn Moves

The ghosts can always move around the room, and they can move through mirrors to the room next door. You can move a pawn one space up, down, or sideways, with a few restrictions.

- Two pawns can't be on the same space, but you can have a pawn at each end of a domino.
- Moving to a neighbouring domino is only allowed if the number you move to matches the number you were on. (There's a mirror for the ghost to go through.)
- Pawns have to stay on top of the dominoes - no leaving the house.
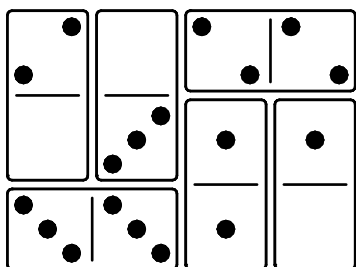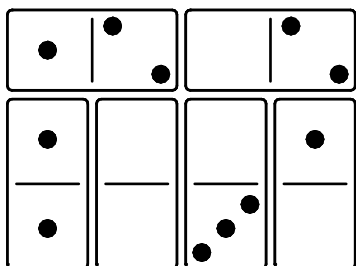- Diagonal moves are not allowed.

Example
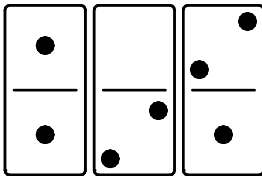
Problems

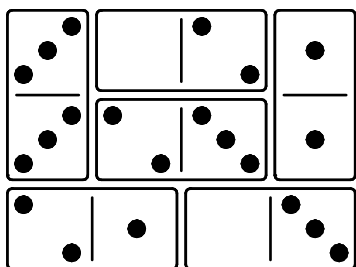Here are the starting positions for several Mirror Donimoes problems. The solutions are listed at the end.
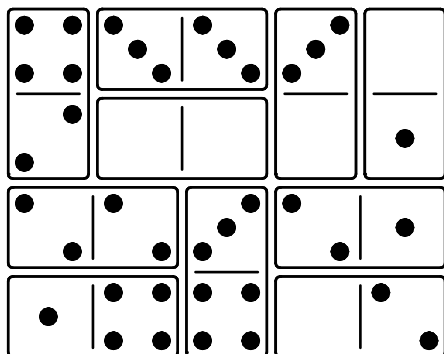
Problem 1

Problem 1b
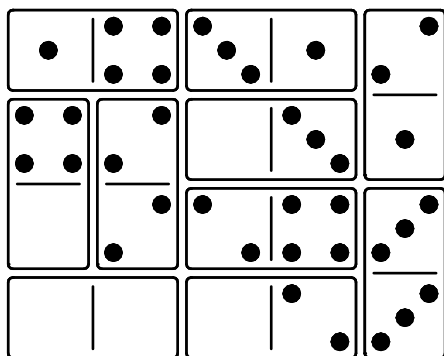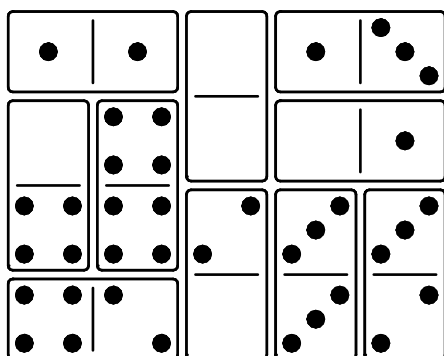

Problem 2

Problem 3
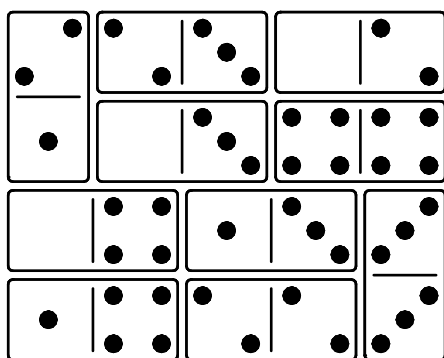

2

Problem 4

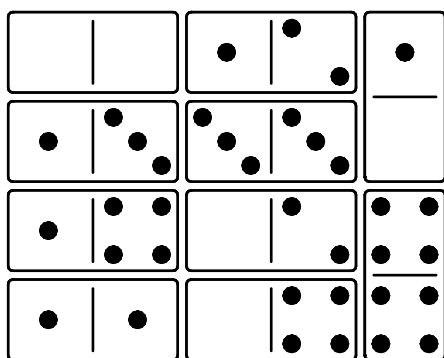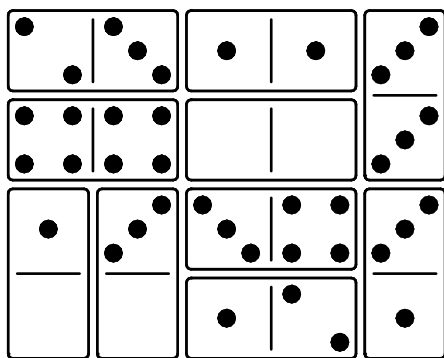*Problem 5*

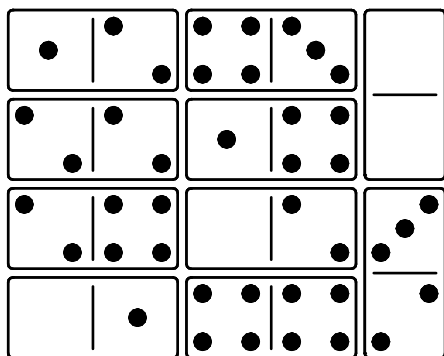*Problem 6*

Problem 7
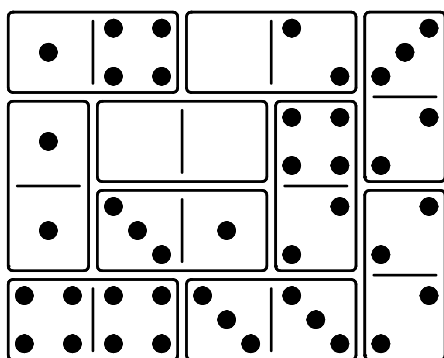

3
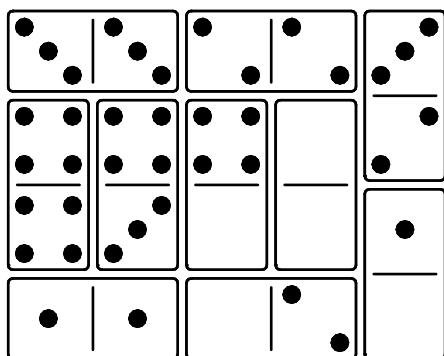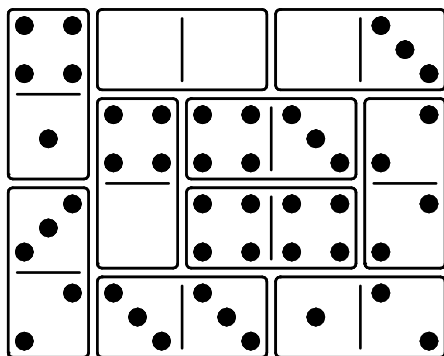
Problem 8

Problem 9
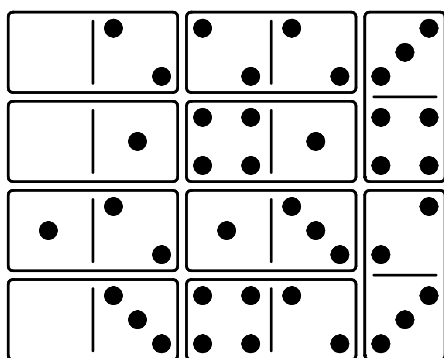
Hand off between two ferries.
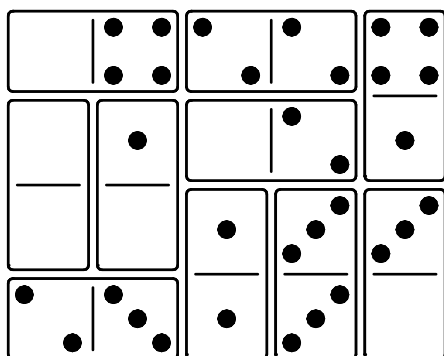

Problem 10

Problem 11

Problem 12

Problem 13

Tough one!

Problem 14

The sea cucumber

Problem 15
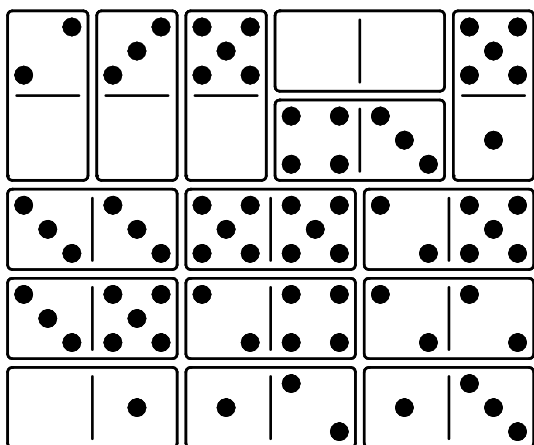
Problem 16

Problem 17

6
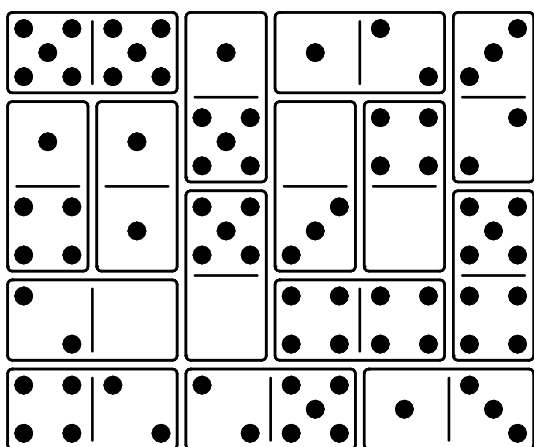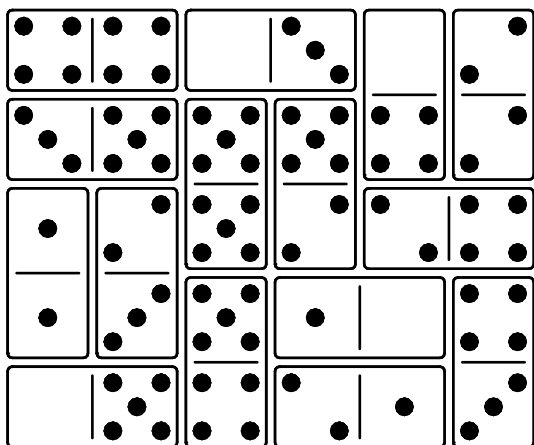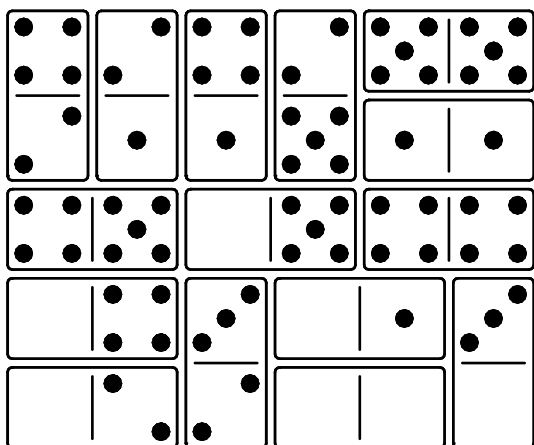
Problem 18

Problem 20

Designed by hand.

Problem 21

7
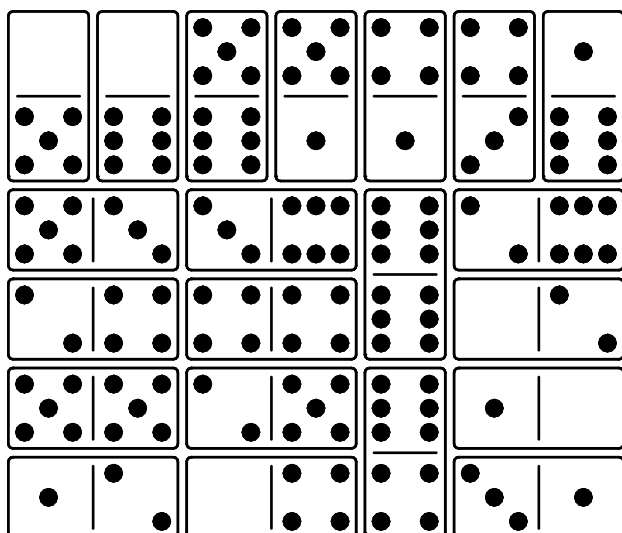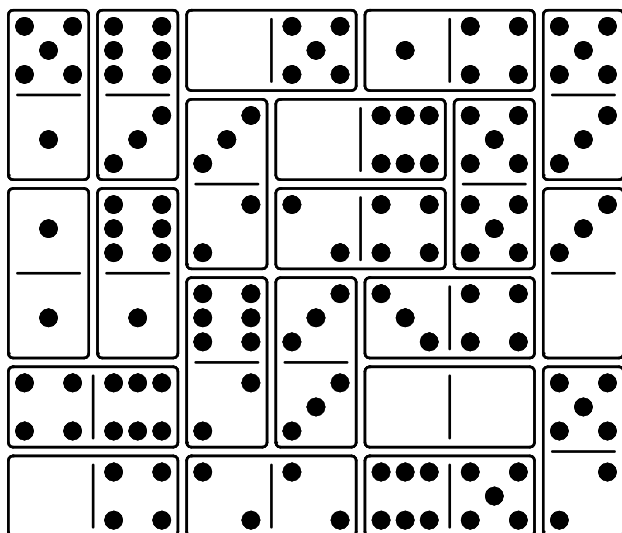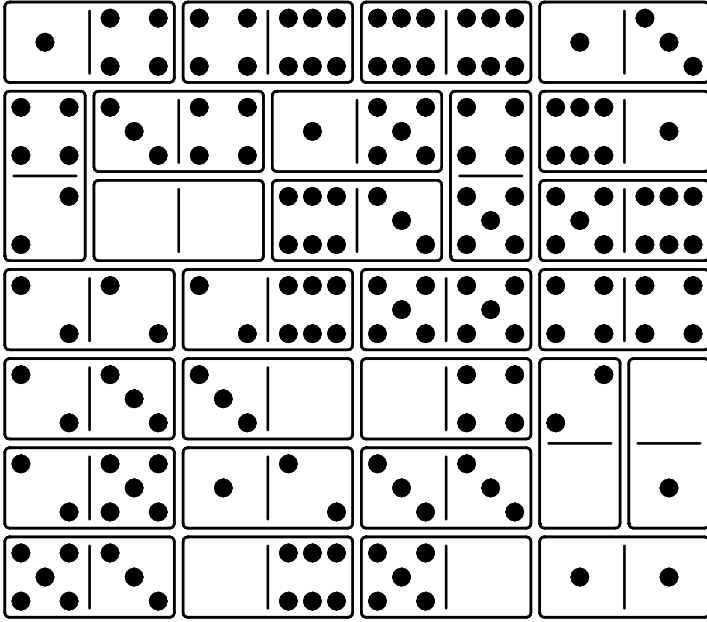
Adding Donimoes

The idea was to avoid the slow setup phase at the start of the other puzzles.

Goal

The goal is to add all the dominoes from the queue onto the board. Each problem shows the queue of dominoes to add, from left to right.

Start

Take the two dominoes from the left end of the queue and place them on the board in the same position relative to each other.

For example, if this is the queue:
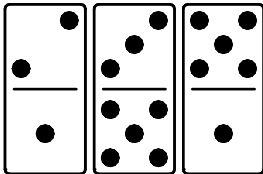
Then the start position is like this:
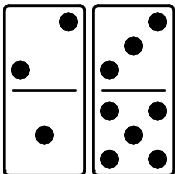
Not like this:
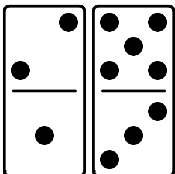
Moves

There are only two ways a domino can move.

Adding

The next domino from the queue can be added to the board if it matches at least two of the adjacent numbers on neighbouring dominoes. Those two adjacent numbers can match the two ends of the domino, or both match one end.

In this example, the 13 can be added, because it matches the 1 below and the 3 below.
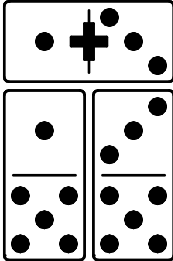
In this example, the 52 can be added, because it matches the 5 beside and the 5 above. The 52 could also be added in the vertical position.
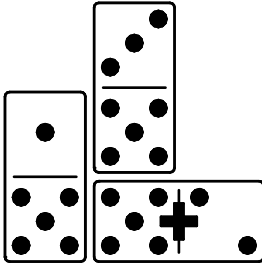
Sliding

Move a domino one space along its long axis so that it ends up with at least one of its numbers next to an adjacent number that adds up to six, or it matches at least two of the adjacent numbers on neighbouring dominoes.

In this example, the left domino can move down, because the 1 and the 5 add to six.
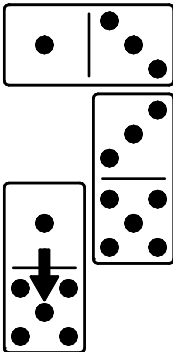
The left domino can move back up, because the 1 matches the 1 above, and the 5 matches the 5 to the right.
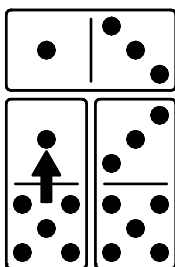
Stay Connected

All the dominoes on the board must stay in one connected group, you can't split the group after moving a domino.

Problems

Here are the starting positions for several Adding Donimoes problems. The solutions are listed at the end.

Problem 1
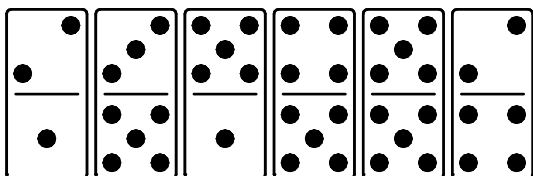
Solutions

Mirror Donimoes Solutions

To distinguish the four different pawns in each solution, the top left is labelled as a (P)awn, the bottom left is a k(N)ight, the top right is a (B)ishop, and the bottom right is a (R)ook. Each pawn move has two letters and each domino move has three letters.

- The first letter identifies the pawn that will move or one of the pawns on the domino that will move.
- For a domino move, the second letter is "D" for (D)omino.
- The last letter shows the direction: (L)eft, (R)ight, (U)p, or (D)own.

Here are the Mirror Donimoes solutions:

1. PD, NR, RU, RL, NU, BL
2. NDL, PD, BD, RDL, RU, PDU, RDL, RDL, NU, NDR, NDR, PDD
3. PD, PD, BD, BD, PR, NR, NR, RL, BL, NU
4. PDL, PR, PD, BD, NR, NR, PD, PD, PR, NR, PR, RU, RDD, BDD
5. BDR, NU, NR, PR, NU, RU, BL, BD, RL, BDR, RDU, RDU, RD, RDU, BDL, BL, BL, BDU
6. PDL, BDU, RDU, PR, NR, RL, BD, RL, RU, RL, RDU, RDU, PR, PDD, BL, PDD, BDL, BL
7. NDD, PDD, PR, BL, BL, BDL, BDL, PDU, PDU, BR, BDD, BDD, PR, PD, NU, NR, NR, RL
8. NR, NU, RU, RL, NDL, RDL, RU, PDU, RDL, RDL, NL, NU, NDR, NDR, PDD, PR, PR, BL
9. RDD, PR, RU, RL, RL, BD, RU, RR, RDR, RDR, BD, BDL, BDL, NU, BD, RDR, NDR, RDR, NDR, BR, BU, NDL, RDL, NDL, RDL, NU, NR, RL
10. RDD, NR, NU, NR, NDR, NDR, RU, NR, RU, RDL, RDL, RL, NDR, BD, NDR, BD, BDL, BDL, RD, BL, RL, BDD, NDL, BU, RDD, BDL, RU, NU, NL
11. PR, PD, PDL, PD, BD, PR, BDU, RDU, RL, PDL, RDL, PDL, RDL, NU, NDR, PDR, NDR, RR, RDD, BDD, RU, PDR, RDD, NDR, PDR, NDR, PDR
12. RDD, BDD, RU, RU, RDU, RDU, RL, BDD, BD, BDD, BL, BU, RDR, PDR, RDR, PDR, BU, PDL, RDL, PDL, PD, RDL, RL, RD, PD, BL, BD, RL
13. NR, PD, PDL, PR, BD, PD, PR, BDU, RDU, RL, PDL, RDL, PDL, RDL, RL, NU, RDR, PDR, RDR, NR, NDD, BDD, NU, PDR, NDD, RDR, PDR, RDR, PDR

14. NDL, RDD, BDD, NR, PD, PD, PR, PDD, PDD, PU, PR, PDD, PU, PL, PDD, NDR, BD, PR, PDU, RU, RL, RU, RDD, RR, RDD, RL, RU, BDD
15. RDR, NR, NR, NDR, PD, PR, PR, PDU, PR, NR, NU, PR, NU, NDR, ND, NL, NDR, NU, RL, NDR, BDD, ND, NDR, BDD, RU, RDU, NDL, PDR, NDL
16. BDU, PR, BD, BL, BL, BL, BDU, PR, PDD, PD, BD, PD, BD, PL, BD, PL, NDL, PD, NDR, PR, NR, RL, PR, NR
17. NR, PR, RU, RU, RDR, BD, BD, BDL, BL, BU, BL, BD, BD, BD, BDD, NR, BDU, NU, BU, RL, RL, NU, BU, RU, NL, BU
18. PDU, NR, NR, NDD, PD, PR, PD, PR, RL, RL, RU, RDL, NU, RU, BL, RR, RU, RDU, RU, BL, BDD, BD, RD, BL, RD, BD, RL
19. NU, NR, NR, PD, PR, PR, NR, BD, RL, RU, RDR, RU, NU, RDR, NDR, NL, RDR, NDR, NU, BDU, NDR, PDR, RL, NDR, PDR, NL, NDR, PDR
20. NR, PR, PD, PR, PU, PR, PD, PR, PU, PR, RL, BD, BD, BDR, PDD, BL, BD, BL, BDR, BD, BL, PDD, BDR, BD, PDD, RDR, PDD, RL, RDD, PL, RDU, BL, RU, BL, PL, BDD, RL, BU, PL, RL, BL
21. NDL, RDD, NR, NU, NDL, NR, PD, PD, PD, PR, PDD, PDD, BD, BD, BD, NR, PDU, NR, ND, PU, PR, ND, PD, NR, PD, RU, RL, RL, BDD, BL, BL
22. NR, NU, NL, NU, NU, RU, RU, NU, NU, PDL, NU, PDR, NR, PR, NR, PR, NR, PR, NR, PR, BDR, PDR, ND, PR, BL, BD, NDR, ND, BDL, PD, PDR, ND, PD, BDL

Adding Donimoes Solutions

Here are the solutions to the Adding Donimoes problems. For each step, move the listed domino left, right, up, or down. Adding moves contain the domino numbers, (H)orizontal or (V)ertical direction, and the position to place it. The top left corner is 11, one space to the right is 21, and one space below is 12.

1. 36D, 23V21, 33D, 53V32, 25H21, 36D, 23D, 22H13, 33D, 53D, 22R

Donimoes is an original puzzle designed by Don Kirkby.