Experiments in Progress

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

- **Bee Donimoes** is a puzzle race game I designed where a swarm of dice bring nectar back to the hive. (1-6 players, double-six dominoes, 3-7 dice, and a timer)
- **Adding Donimoes** is a puzzle I designed where you add dominoes in the given order. (1 player, double-six dominoes)

Bee Donimoes

A puzzle race game where a swarm of dice bring nectar back to the hive.

Players

1-6

Equipment

- a set of dominoes from double blank to double six
- 3-7 six-sided dice
- a one-minute timer

Object

Bring the nectar back to the hive in as few moves as possible, faster than the other players. One die is chosen as the queen bee and doesn't move, the others have to form a connected group around her.

Setup

Shuffle the dominoes, and place them face up to form an 8x7 rectangle of numbers. If you have seven dice, put one aside. Then rotate the remaining dice to form a sequence of numbers starting with 1. Place the 1 die on the 1 in the 1 / blank domino. Place the 2 on the 2 / blank, the 3 on the 3 / blank, and so on.

Play

The game is played in rounds, and each round starts by choosing which die is the queen bee. If you put aside a die, roll it to choose the queen, otherwise roll one of the dice on the board and then put it back where it was with the number it had before. If you roll a number that's not on the board, reroll.

The queen bee never moves during a round, and all the other bees have to bring their nectar back to her in one connected group. (Diagonal connections don't count.)

The dice can only land on their own numbers. They can move between numbers in two ways: 1. In a straight line along a row or a column. They can pass over other numbers, squares with their own number, or other dice. This counts as one move. 2. Changing direction over other dice. In the middle of a regular move, a die may make a 90° turn directly above another die. Later in the same move, it may make more turns directly above other dice. No matter how many turns it makes, this still counts as one move.

The blank on the other end of the queen bee's domino is wild. Any die can land there. A die may also leave the wild space on a later move.

Solve

As soon as the queen bee is chosen, all players try to solve the puzzle at the same time. Do not touch the dominoes or dice while you are trying to solve the puzzle! Once a player has found a solution, they say the number of moves they need, and start the timer. The other players have until the timer ends to find a better solution.

A solution with fewer moves is always better. If two players find solutions with the same number of moves, then the player with fewer points counts as a better solution. If they have the same points, then the player who claimed it first counts as a better solution. It is a valid solution to say that it's impossible, but any other solution is better.

Demonstrate

Whichever player has claimed the best solution when the timer goes now has to demonstrate that solution, counting the moves out loud. Players should demonstrate with no more than a few seconds of hesitation. If they made a mistake or can't remember the solution, let the player who claimed the next best solution demonstrate it.

The player who successfully demonstrates a solution scores one point. A winning score is 9 minus the number of players.

Next Round

Remove the queen bee from the board. If that leaves fewer than 3 dice, shuffle all the dominoes and set up again. Otherwise, place all the other dice on the board back in their starting places. Roll to choose the next queen bee.

Adding Donimoes

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

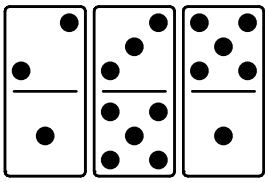
Goal

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.

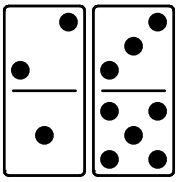
Start

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.

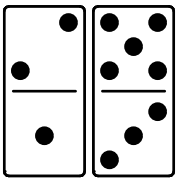
For example, if this is the queue:



Then the start position is like this:



Not like this:



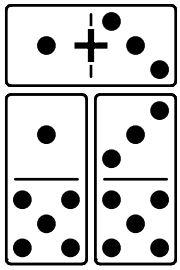
Moves

There are only two ways a domino can move.

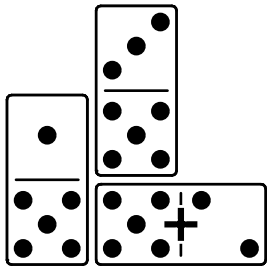
Adding

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.



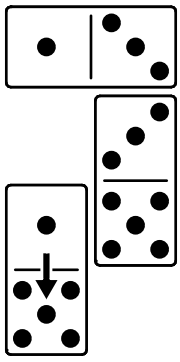
In this example, the 52 can be added, because it matches the 5 beside and the 5 above. The 52 could also be added in the vertical position.



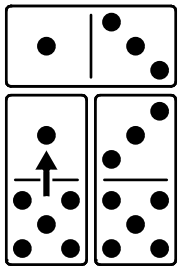
Sliding

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.



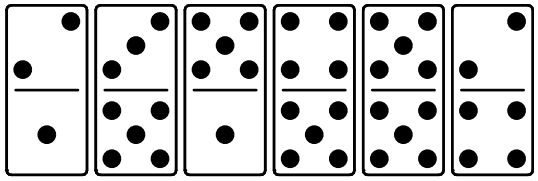
Stay Connected

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

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.