## Sum Fun



Goal: To put the four square tiles with numbers on them into the square frame such that the sums of the numbers where each corner of the tiles meets add up to 10 .

How it works: There are four square tiles with single digits on each corner and round pins through their centers and a square frame with numbers around its perimeter sized to accept the four tiles. There are holes in the frame to accept the pins in each tile when they are inserted. A player can pick up one of the tiles and rotate it and place it into the frame so that the numbers in the corner of the frame combined with the number on the tile add up to 10 .

The player would then select a second tile and after rotating as needed place it into the frame, again placing it such that the numbers wherever four digits come together add up to 10 . This would continue until all four tiles are placed and all sums are confirmed to be 10.

There are numbers on both sides of each tile, raised on one side, and sunken on the other. The puzzle requires that the tiles be turned such that all numbers are the same configuration (raised or sunken) on all squares in order for there to be a valid solution. Once a solution has been found for one configuration, all four tiles may be turned over for a new challenge.

Strategy: Always start at a corner on the frame and determine the single digit that will satisfy the equation to make a sum of 10 . Then find how many tiles have the required number on them. If there is only one tile with that number, you immediately know the location for one of the four. If there are two tiles that could satisfy the equation, try one of them and see how far you can get with the other tiles. If you hit a dead end, then you know the other tile must be the correct one for that position. Note that the largest digit used on this puzzle is 6 (not a 9).

Solutions for both sides of the tiles are shown on the back.


Solution 1 - Numbers Raised on Tiles
Solution 2 - Numbers Flush or Recessed on Tiles

