Secret Places Notes

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## One Dimension

Tom O’Brien & Chris Wallach (2010) called it *Mystery Person* and report on the use of the task. Chris Wallach (2011) provides further evidence of its popularity and pedagogic usefulness.

Meanwhile I created an applet to make it easy to ‘play the game’.

Unzip the folder, then open the html file “Secret Places 1D.html” in a browser.

### Applet Use

If you click on or very near the black segment at a place around the table, the applet will show red or blue depending on whether your guess is hot or cold. Hot means that the mystery place is at or within the spread (initially 1) on either side.

You can get a new mystery number by clicking on the yellow button *New Mystery Place*.

You can change the number of people at the table by clicking on the *number of places* buttonand holding the mouse button down, then typing in a number, then releasing the mouse button.

The *hot* *marker* and *cold* *marker* buttons provide circles of the appropriate colour that you can drag around and leave at different places around the table to help you remember your reasoning.

*Shoe Hot Counts* displays not only a colour, but the number of secret places adjacent to the selected cell.

### Other parameters

You can change other parameters at the beginning, and then pressing Lock Parameters button to lock them. You can unlock them only by clicking-and-holding on the button and typing 3.141 before releasing the mouse. The idea is that the other parameters can be set by the teacher, but learners only get to change the number of places at the table.

You can change the spread by clicking and hold on the *spread* button and typing in a number.

You can alter the number of mystery or secret places by clicking and holding on the *mystery places* button and typing in a number. It will only be accepted if it is from 1 to number of places ­– 2.

## Two Dimensions

The other applet “Secret {laces 2D.html” takes the same idea into two dimensions. But there is a wrinkle, because you can choose between a variety of surfaces. Clicking on the appropriate button selects that surface. To see how that surface works, click on “Show Adjacency” and then select various cells in the grid to see the cells that are deemed to be one step away. It may help to use the “Show Identification” which uses the mathematical notation for how opposite sides of the rectangle are ‘identified’. The same-looking arrows are matched up in the same direction! You can leave the arrows showing until you get used to what happens when you move off the rectangle as shown.

You can alter the information to reveal *warm* as well as *hot* and *cold*, and the number of secret places adjacent to your selected cell.

## References

O’Brien, T. & Wallach, C. (2006). What is Fifth Grade? *Phi Delta Kappan* p73-376.

O’Brien, T. & Wallach, C. (2011) Mystery Person. *Mathematics Teaching* 221 p34-37.

Wallach, C. & Mash-Duncan, C. (2011). *The Montana Math Enthusiast* 8 (1 & 2) p147-159.