Lesson 2

Only Space Left Part 3

In the previous lesson we discussed looking at groups of rows or columns and identifying situations where only one possibility is left for a number.

In this lesson we want to expand on that with the idea of intersecting rows and columns. If, using the logic we applied in lesson 1, you narrow a number value to a group of 3 squares, you can check the intersecting rows or columns to see if they narrow your choices down to one.

There are 3 such examples on this grid. Let's start by

focusing on the green square at C7. Using the logic from lesson 1 applied to the three boxes 1, 4, and 7, we can see that the number 1 must be either in square C7 or C9. Two squares isn't enough to establish the number's location, but we can look at the *intersecting* row of boxes (7, 8, and 9) to look

for help in narrowing our options. We can then see that the cell D9 has a 1 in it. Because row 9 can only have one square with number 1, square C9 can't be a 1. This means C7 is the only square left that can be a 1.

Let's use this same logic

	A	B	C	D	E	F	G	H	I
1				9	2				
2			2	7	4	6			3
3		1	6						9
4	8	4		3					6
5	2	6				5			
6	1	7			6		8		
7			1			4		2	
8			4					6	8
9		3		1				9	7

looking at box three. Because squares C2 and E1 both contain the number 2, we know that either G3 or H3 must be the number 2 for box three. By evaluating the intersecting columns, we can see that the 2 at H7 removes square H3 from consideration, so the 2 must go at square G3.

There's one more example in box three. See if you can identify why the number 6 must be in cell G1.

This strategy can be very valuable, and can be applied to any box.

The next lesson covers **Using Pencil Marks**.