

# Lesson 5

---

## Naked Pairs

Naked Pairs are used to eliminate potential values from squares. An example might be the easiest way to explain.

The figure below shows a box with 3 open squares,

	5	8
6	9	3
		2

all accurately marked with pencil markings. As you can see, both the upper left and lower left boxes contain pencil marks for 1 and 7. Since there are two squares, and they both have the same two number possibilities, one must contain a 1, and the other a 7. We don't need to know which has the 1 and the 7, just that between them one is 1 and one is 7. What this means is that the numbers 1 and 7 are taken, and no other square in the box can have those values. Looking at our example, that means we can eliminate the 1 and 7 pencil marks from the bottom-center square (which means it must be a 4).

So the situation above is referred to as **Naked Pairs**, and it occurs when two squares have the same two (and only two) number possibilities. When that occurs, it eliminates those two numbers as possibilities in the other associated squares.

Our example here used a box as an example, but it also applies to naked pairs appearing in the same column or row. In our example, 1 and 7 appeared naked in the left-most column of the box. This means that the naked pair also affects the column they are in. Naked pairs are a great way to refine your board and possibilities.

The most common occurrence is naked pairs – two squares with the same two numbers in the same box/row/column. However, the logic also applies to 3 squares with the same 3 numbers, 4 squares with the same 4 numbers, etc.

## Excluding Pencil Marks

Sudoku OTW also helps when you identify pencil marks to exclude. When in Auto Pencil Mark mode (and Hint mode), you can exclude pencil marks simply by highlighting the square and tapping on the pencil mark button in the control panel. The button will stay depressed (since it is a valid automatic pencil mark), but the number will turn red and the number will be removed from the square. To re-include a previously excluded number, simply tap the (red) pencil mark button again.

Both the Hint mode and the Solo mode recognize and ignore excluded pencil marks.

The next lesson covers **Solo Patterns**.