Exercises

Remember, to truly learn something you have to put it into practice, so work as many exercises as you can. In this first chapter, of course, we're not yet dis- cussing programming, but even so, I encourage you to try some exercises out. Think of these questions as warm-ups for your fingers before we start playing the real music.

- **1-1.** Try a medium-difficulty sudoku puzzle (you can find these all over the Web and probably in your local newspaper), experimenting with different strategies and taking note of the results. Can you write a general plan for solving a sudoku?

	9				7		1	
5				6				3
2		1	5					
	5	2				3		
				1				
	3	6				2		
9		5	1					
7				8				4
	2				4		5	

General Plan to solve this sudoku

1. Assign a grid values to each —- numbers for column, letters for row.

2. Count the number of given numbers in each row and each column, and record.

3. Starting with the row or column with the highest count of given numbers, look for the row or column that transects the selected row or column that has the highest given count of numbers. Or per square. If there are ties, select the row with the lowest unused value

4. Sum each row, column, and square and match that against 45 (the digits 1-9 added up) minus 1 so that when 8 of 9 squares are filled in a row or column,

5. With both row and column selected, select the 9 spot square that the transection happens in.

6. Find for what values are listed to determine which are not listed in either row, column or square.

    1. If more than one number remains, keep those numbers for future use, but don't enter them into the puzzle. Else if one number remains, put that number into the puzzle and go to step 6

7. Repeat steps 3 through 5 in order of the most populated column and row to the least populated row / column until the puzzle is solved for.