**CS 7B - Fall 2017 - Assignment 2: A Latin Square ADT for Ken Ken and Sudoku. Due 11/6/17**

Create a Latin Square ADT to meet these specifications.

**ADT: Latin Square**

**Description** An object represents an $n \times n$ square array which contains $n$ different elements with each element occurring $n$ times but with no element occurring twice in the same column or row. The elements can be simply the numbers $1, 2, 3, \ldots, n$

**Constructor:**

Takes a value $n$ and constructs a random latin square of that dimension using the `int**` type.

`Define KenKen`: Allow the user to specify a cage pattern and then impose a clue structure on that cage pattern

For example, the user can pick this cage pattern and clue set for $n = 6$:

```
6
11 + A1 A2
2 / B1 C1
20 * D1 D2
6 * E1 F1 F2 F3
3 - B2 C2
3 / E2 E3
240 * A3 A4 B3 B4
6 * C3 D3
6 * C4 C5
7 + D4 D5 E5
30 * E4 F4
6 * A5 B5
9 + F5 F6
8 + A6 B6 C6
2 / D6 E6
```

`Sudoku`: Convert your $n = 9$ latin square to a Sudoku pattern and print out a puzzle with at least 17 givens. Is it uniquely solvable?