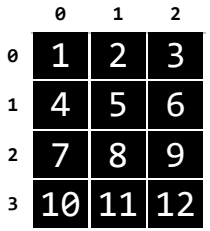
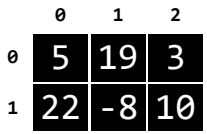
2D Arrays



A two-dimensional array (2D) is a block of memory, visualized as a table with rows and columns. In C++ this is implemented (under the hood) by creating a **1D** array whose elements are, themselves, also **1D** arrays.

Examine this code:

```
1  int a2d[2][3]; // a2d is a 2D array
2
3  a2d[0][0] = 5;
4  a2d[0][1] = 19;
5  a2d[0][2] = 3;
6  a2d[1][0] = 22;
7  a2d[1][1] = -8;
8  a2d[1][2] = 10;
```



It is easiest to think of `a2d` as containing **two rows** and **three columns**: a `2 × 3` array. To access an element of a **2D** array, use **two subscripts**. The first is the **row**, the second is the **column**. Both are zero-based. On line 6, for instance, the first index (here `1`) signifies the second row and the second index (here `0`) denotes the column within the array.