

① Arrays - 2D

② Exam 1 Review

2d array in Java is just an array of arrays.

n	10									
games Per Player	3	8	2	5	7	4	12	11	6	9

data

```
int n = stdin.nextInt();
```

```
int[] gamesPerPlayer = new int[n];
```

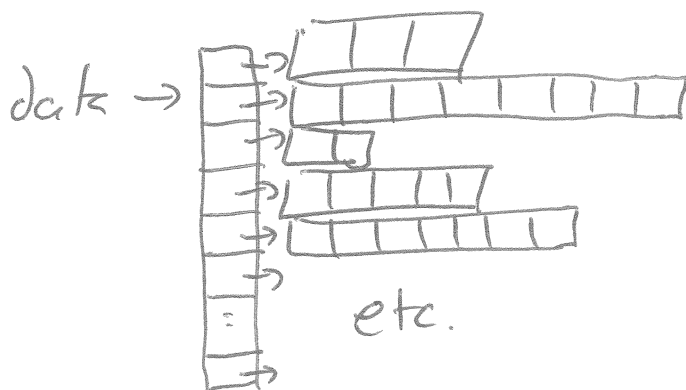
```
int[][] data = new int[n][];
```

```
for (int i = 0; i < n; i++) {
```

```
    gamesPerPlayer[i] = stdin.nextInt();
```

```
    data[i] = new int[gamesPerPlayer[i]];
```

```
}
```



`data[i]` refers to a 1D array reference

to refer to a cell `data[i][j]...`

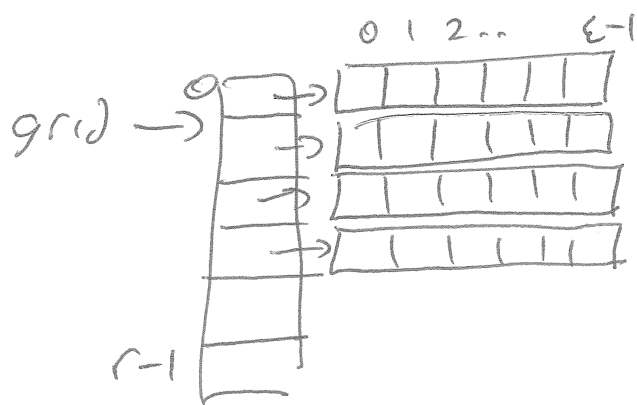
`data.length` This equals the # of arrays in `data` (for me this is `n`)

`data[i].length` → this is the length of array, index `i` in `data`
at

`data[0].length` is 3

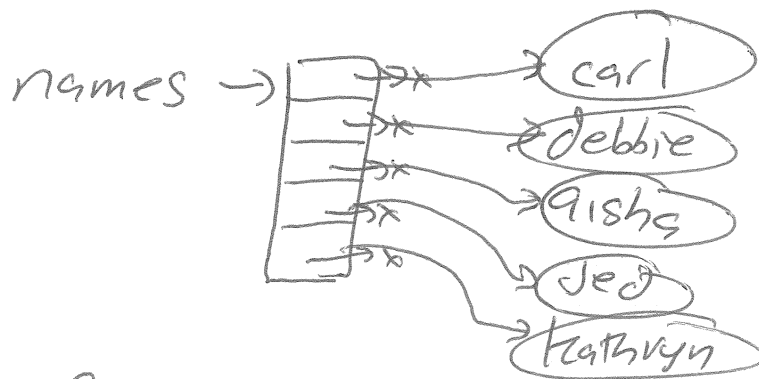
`data[1].length` is 8 etc.

`int[][] grid = new int[r][c];`



tic-tac-toe
mine sweeper
checkers
connect4
etc.

```
String[] names = new String[n];
```



```
for (int i = 0; i < n; i++)  
    names[i] = stdin.next();
```

```
Car[] mygarage = new Car[5];
```

```
for (int i = 0; i < n; i++) {  
    String type = stdin.next();  
    mygarage[i] = new Car(type, 6);  
}
```