

[http://cs.gettysburg.edu/~cpresser/cs111/ArrayTests/ArrayTests.java\\_B.html](http://cs.gettysburg.edu/~cpresser/cs111/ArrayTests/ArrayTests.java_B.html)

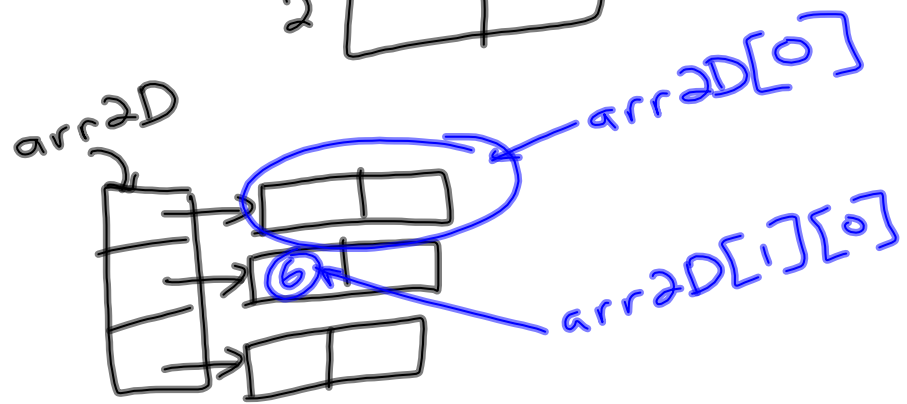
/Courses/cs111/sectionB/ArrayTests.java

`int[][] arr2D;`

`arr2D = new int[3][2];`

`arr2D[1][0] = 6;`

	0	1
0		
1	6	
2		



```

for(int i=0; i < arr2D.length; i++){
    for(int j=0; j < arr2D[i].length; j++){
        S.o.pln(arr2D[i][j]);
    }
}

```

`int[][] yaArr = { {3, 2, 1}, {4, 5, 6} };`

3	2	1
4	5	6

void printArray2D(int[][] arr)

- check for null

- 1 for loop (each row)

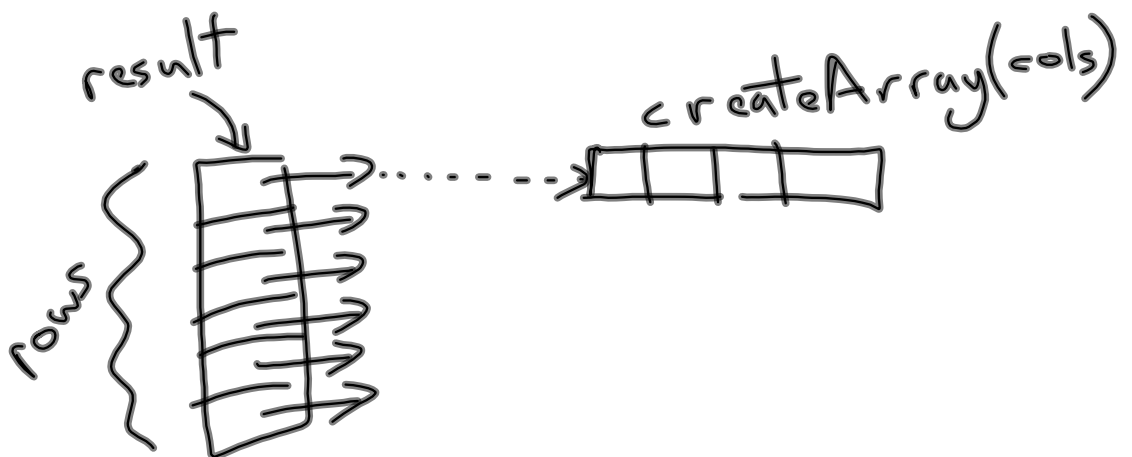
↳ calls printArray

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for(int e: array)

```
int[][] createArray2D(int rows, int cols)
```

```
int[][] result = new int[rows][cols];
```



$$A \rightarrow \begin{bmatrix} a & b \\ c & d \end{bmatrix} \times \begin{bmatrix} e & f & g \\ h & i & j \end{bmatrix} = B$$

$2 \times 2$ 
 $2 \times 3$

result

$$\begin{bmatrix} ae+bh & af+bi & ag+bj \\ ce+dh & cf+di & cg+dj \end{bmatrix}$$

$2 \times 3$

```

for(int i=0; i < result.length; i++) {
  for(int j=0; j < result[i].length; j++) {
    for(int k=0; k < A[i].length; k++) {
      result[i][j] += A[i][k] * B[k][j];
    }
  }
}

```