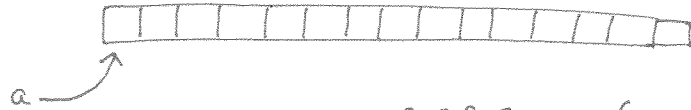


Static

```
int a[3][5];
```

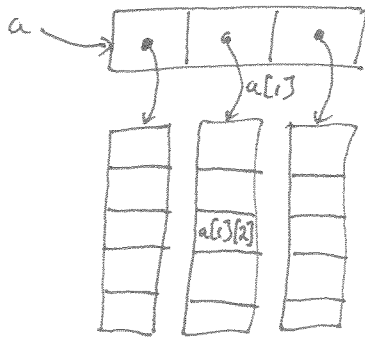


$$a[x][y] \approx *((int *)a + x*5 + y)$$

↑
how C implements
a 2D array

Dynamic version 1

```
int **a;
```



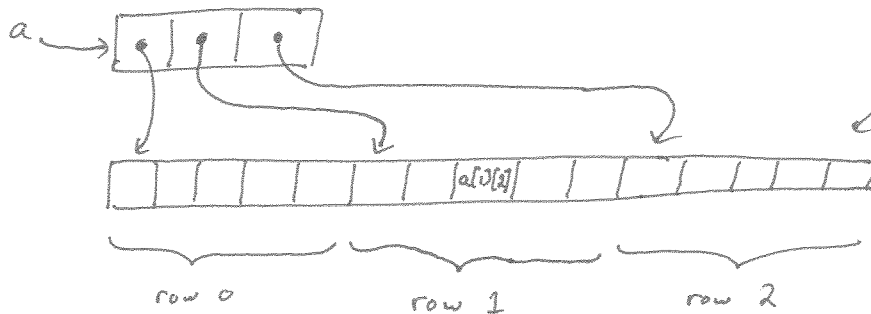
$$a[x][y] \approx **(*a+x) + y$$

↑
involves 2 dereferences

← calls malloc once for each row

Dynamic version 2

```
int **a;
```



calls malloc once
for all rows