

matrix X

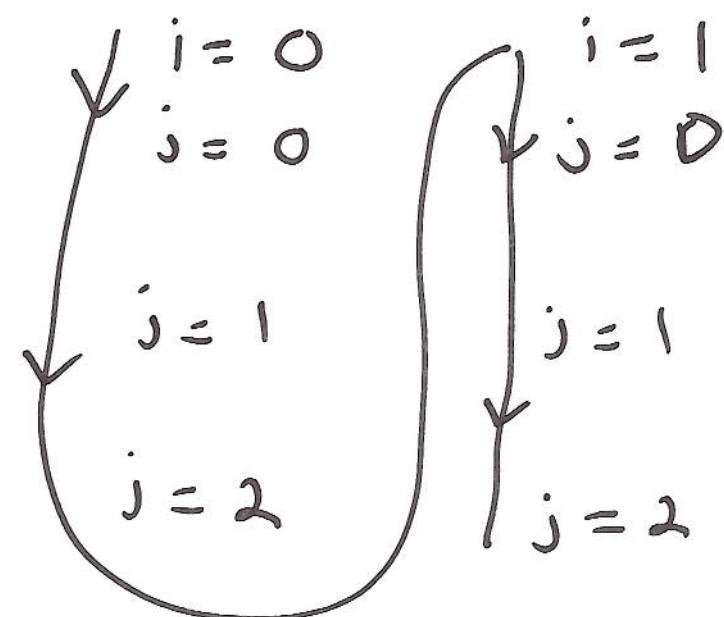
1	2	3
1.5	2.5	3.5

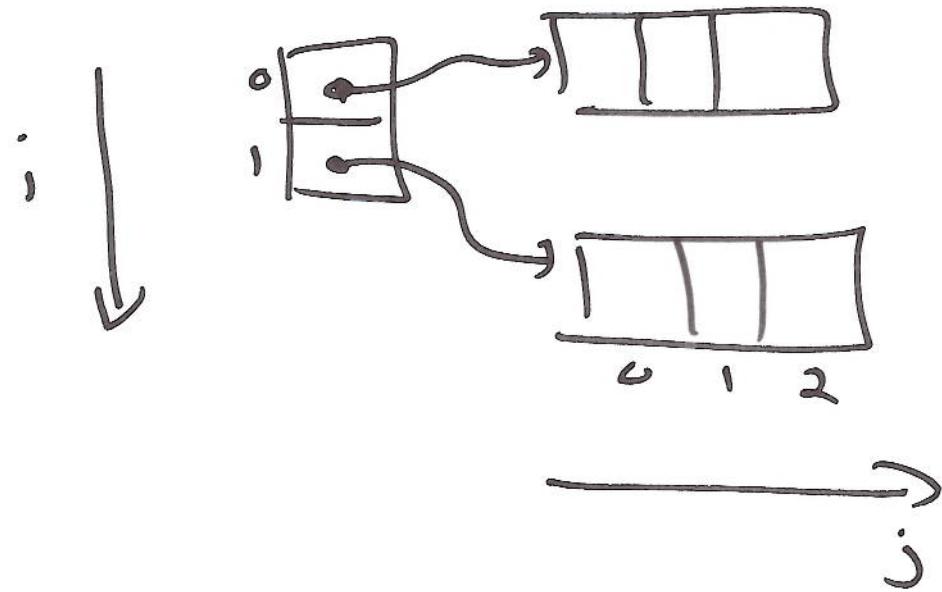
Create Transpose

0	1	1.5
1	2	2.5
2	3	3.5

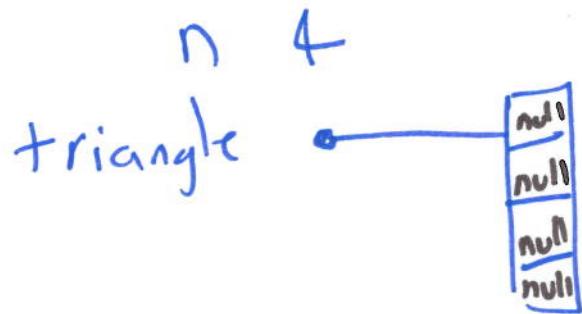
Transpose

1	1	1.5
1	2	2.5
1	3	3.5

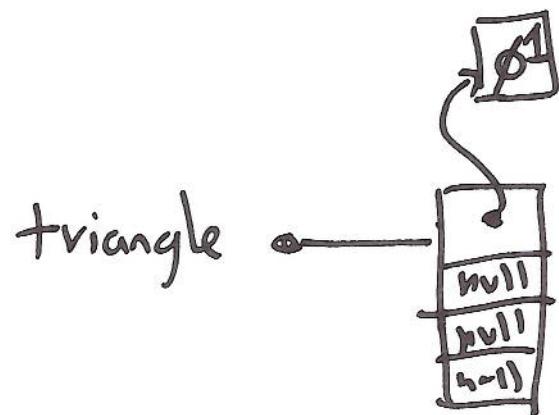




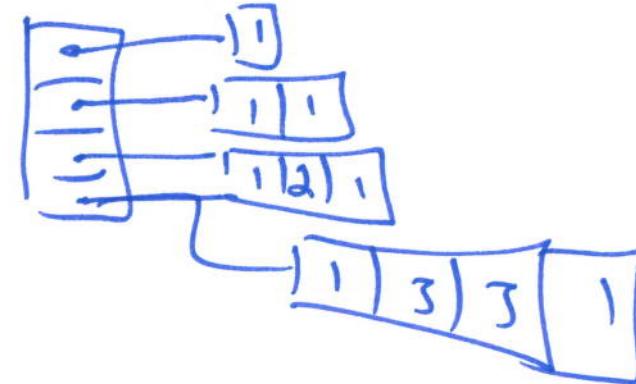
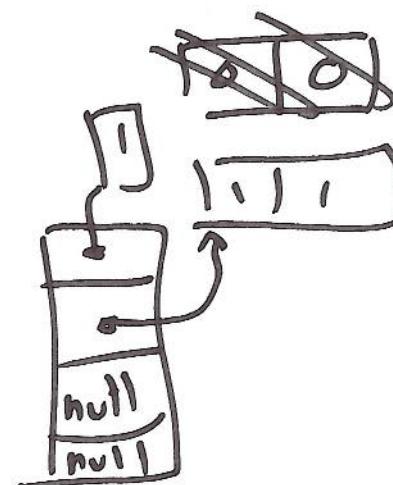
nextTriangle (4)



$i = 0$

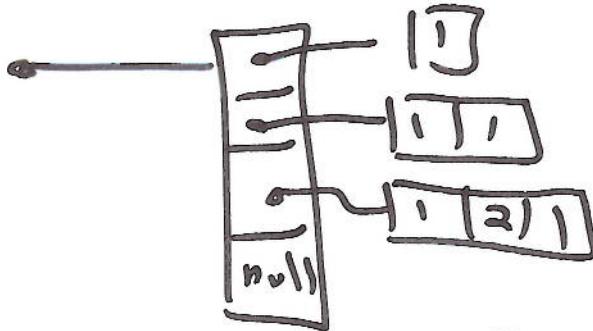


$i = 1$



$n = 4$
 $i = 3$

triangle

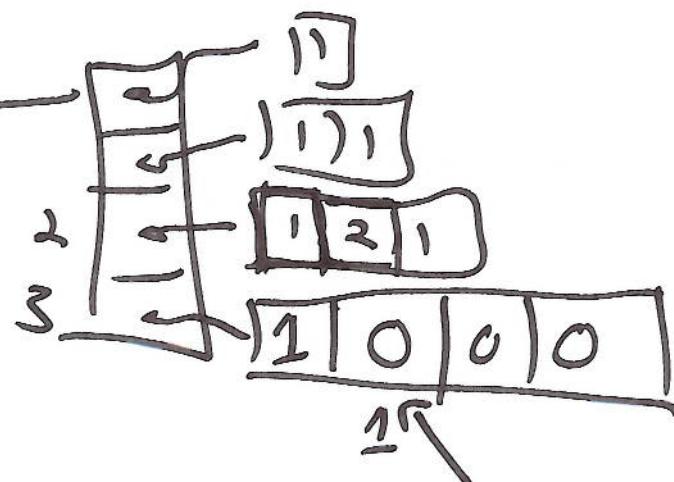


$\text{triangle}[i] = \text{new int}[i+1]$
 $\text{triangle}[i][0] = 1$

$n = 4$

$i = 3$

triangle



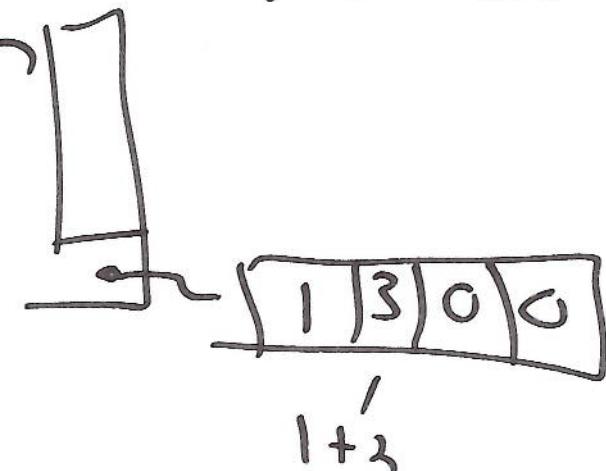
$n = 4$
 $i = 3$

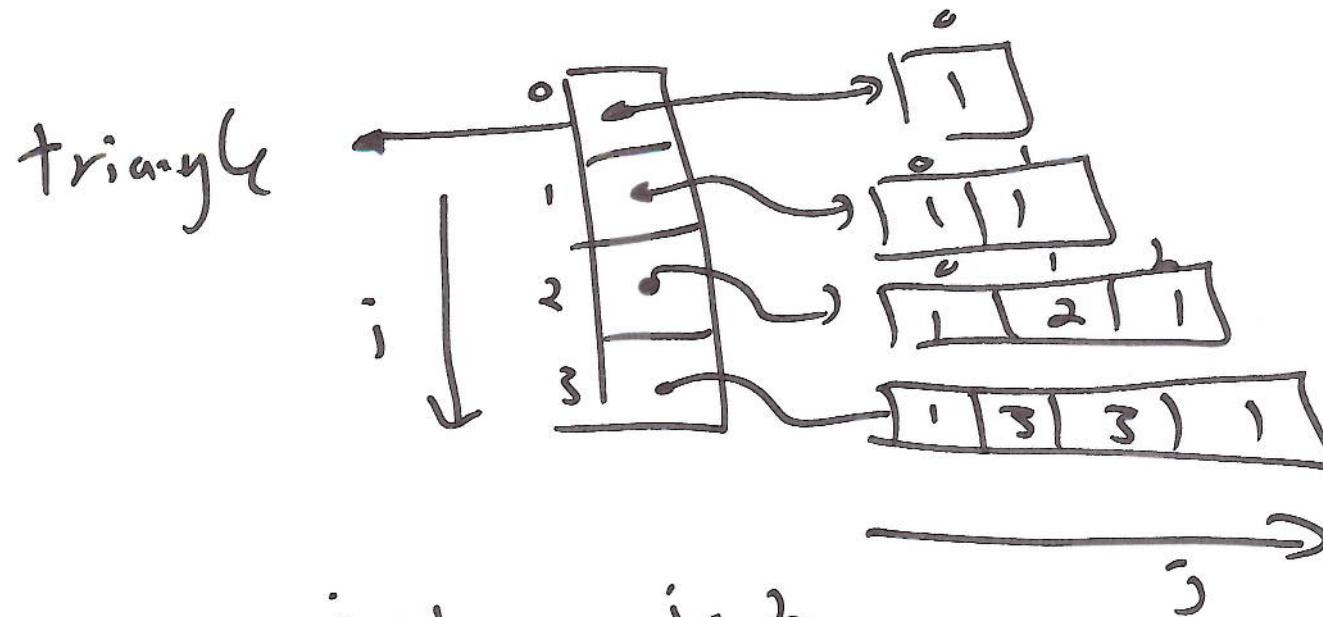
triangle

$j = 1$
 $j < i \vee$

$\text{triangle}[i][j]$
 $= \text{triangle}[i-1][j]$
 $+ \text{triangle}[i-1][j-1]$

triangle





$$i = 0 \\ j = 0$$

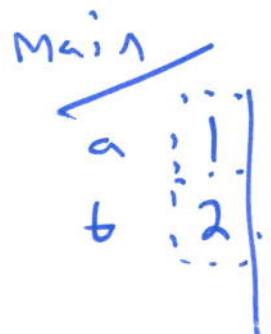
$$i = 1 \\ j = 0$$

$$i = 2 \\ j = 0$$

j

$$i = 1 \\ j = 1$$

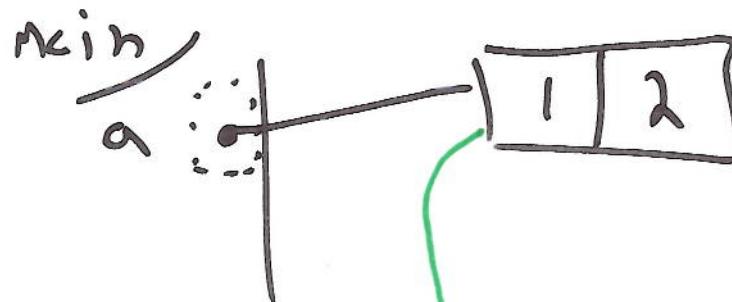
$$i = 2 \\ j = 1 \\ i = 2 \\ j = 2$$



$\text{swap}(a, b)$

swap		$x = \text{temp}$	$x = y$	$y = \text{temp}$
x	1	x	2	x
y	2	y	2	y
temp	1	temp	1	temp

```
        ; array[1] = temp;
```

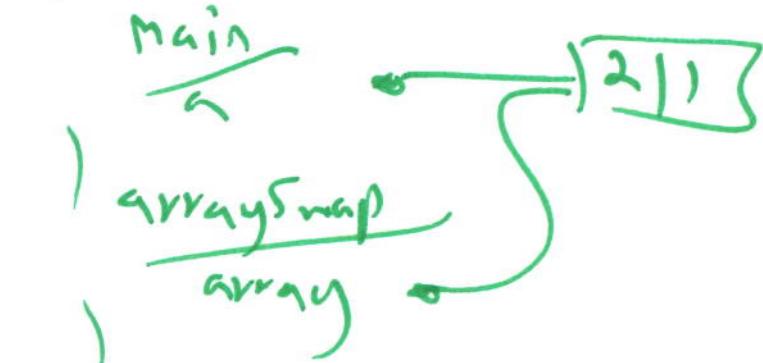


arraySwap(a)

arraySwap
array

temp = array[0]

temp = 1

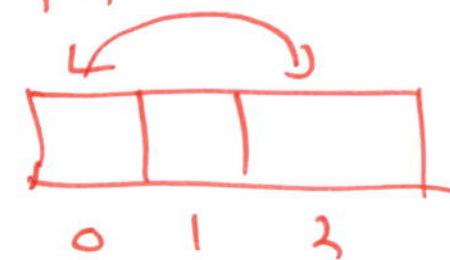
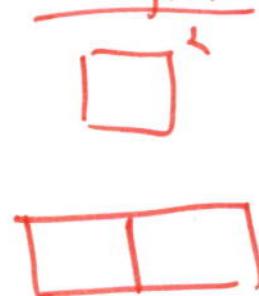
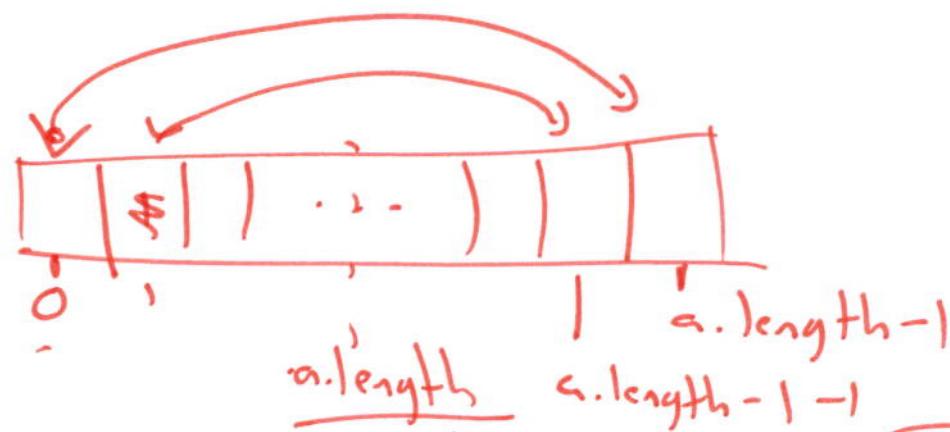


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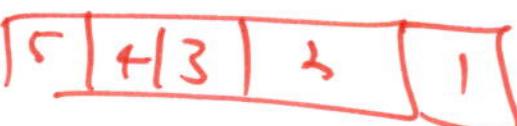
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array[0] = array[1]
```



$$\boxed{1 \ 2 \ 3 \ 4} \Rightarrow \boxed{4 \ 3 \ 2 \ 1}$$



$$\left\lfloor \frac{a.length}{2} \right\rfloor = 3/2 \text{ (E.I.)}$$

test → 
 reverse (test)

test → 
~~exp~~ → 

test == exp? X

Arrays.equals (test, exp)

test.length == exp.length

test[0] == exp[0]

test[1] == exp[1]

test → 
~~exp~~ → 

exp → 
~~test~~ → 

Arrays.equals (test, exp) X

test.length == exp.length

test[0] == exp[0] X

1	2	3	4	5
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