Swap x and y

i/p) x = 5 , y = 6

o/p) x = 6 , y = 5

```java
public static void solve(int num1, int num2) {
    int c = num1;
    num1 = num2;
    num2 = c;
}
```

num1 = 5 , num2 = 6

c = 5

num1 = 6

num2 = 5

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int x = scn.nextInt();
    int y = scn.nextInt();

    solve(x, y);    // function calling
}

public static void solve(int x, int y) {
    int c = x;
    System.out.println("c = " + c);

    x = y;
    System.out.println("x = " + x);

    y = c;
    System.out.println("y = " + y);

    System.out.println("x = " + x);
    System.out.println("y = " + y);
}
```

Swap x y z

Assign the value of x to y, y to z, z to x.

ip { x = 10, y = 20, z = 30 }

op { x = 30, y = 10, Z = 20 }

Code

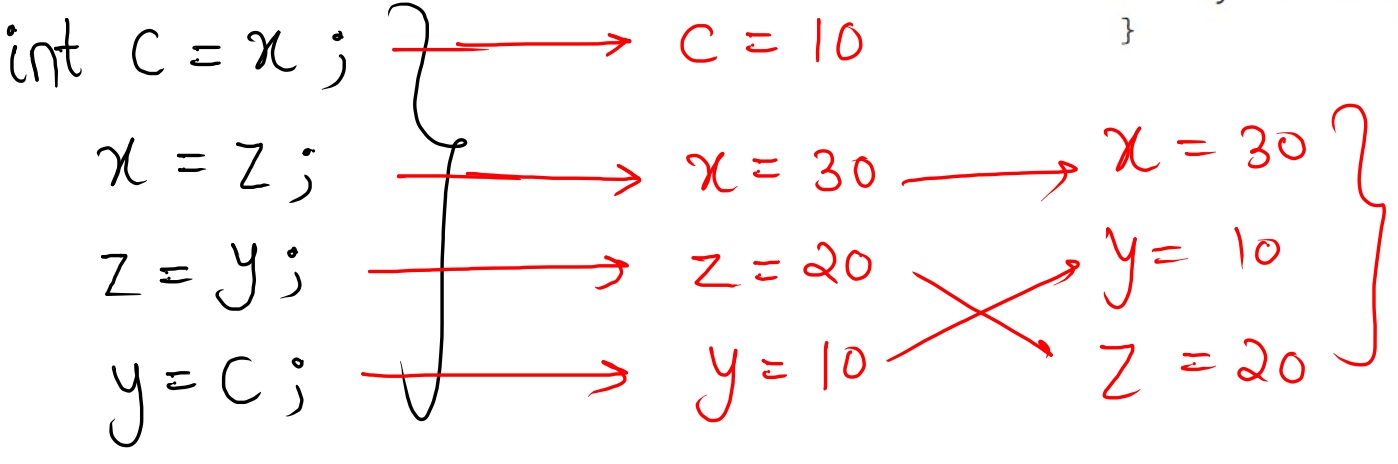
```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int x = scn.nextInt();
    int y = scn.nextInt();
    int z = scn.nextInt();

    solve(x, y, z);    // function calling
}

public static void solve(int x, int y, int z) {
    int c = x;
    x = z;
    z = y;
    y = c;

    System.out.println(x);
    System.out.println(y);
    System.out.println(z);
}
```

dry run



Given x and y, print xy

```java
public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        int t = scn.nextInt();
        for (int i = 0; i < t; i++) {
            int x = scn.nextInt();
            int y = scn.nextInt();

            solve(x, y);
        }
    }

    public static void solve(int x, int y) {
        int ans = x * 10 + y;
        System.out.println(ans);
    }
}
```

⇒ Palindrome

22 = 22 → pal

23 ≠ 32 → not pal

1 2 3 2 1

121 = 121

123 ≠ 321

I/P) 3 digit no.

if it is palindrome or not

121 ⟶ palindrome

123 ⟶ not a palindrome

Dry run

num = 121

int a = num % 10 = 1

int b = num / 10 = 12

int c = b % 10 = 2

int d = b / 10 = 1

int ans = a * 100 + c * 10 + d;

= 1 * 100 + 2 * 10 + 1

= 121

```
if ( num == ans)
    Syso ( P)
else
    Syso ( NP)
```

Ex:- num = 123

int a = num % 10 = 3

int b = num / 10 = 12

int c = b % 10 = 2

int d = b / 10 = 1

int reverse = a * 100 + c * 10 + d;

= 3 * 100 + 2 * 10 + 1

= 300 + 20 + 1

= 321

```
if ( num == reverse)
    Syso ( P)
else
    Syso (NP)
```

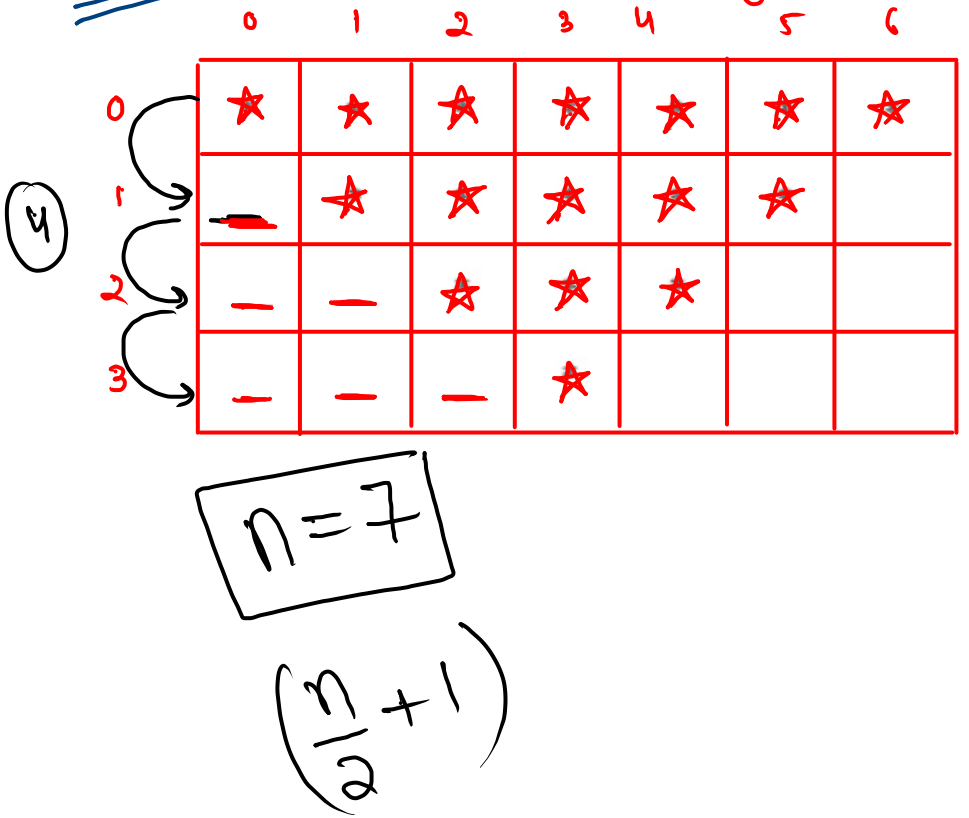
Duel Palindrome

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();
    for (int i = 0; i < n; i++) {
        int num = scn.nextInt();
        palindrome(num);
    }
}

public static void palindrome(int num) {
    int a = num % 10;
    int b = num / 10;
    int c = b % 10;
    int d = b / 10;

    int reverse = a * 100 + c * 10 + d;
    if (num == reverse) {
        System.out.println("YES");
    } else {
        System.out.println("NO");
    }
}
```

Duel Inverted Triangle




```
int st = n;
int sp = 0;
int row = (n/2) + 1;
for(int i=0; i<row; i++){
    for(int j=0; j<sp; j++){
        Syso(" ");
    }
    for(int j=0; j<st; j++){
        Syso("*");
    }
    sp++;
    st = st-2;
}
```

$n = 7$ row = 4

$n = 5$ row = 3

$n = 3$ row = 2

$n = 1$ row = 1

$$row = \frac{n}{2} + 1$$