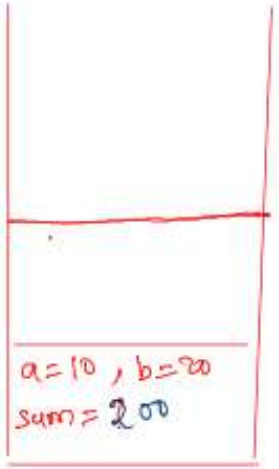
functions

```
p.s. v. main(string[] args){
    int sum=alpha(10,20);
    Syso(sum);
}
p.s. char alpha(int a, int b){
    int sum=a+b;
    return sum;
}
```

① parameter sequence must be same
② Return type → Void (no return);
focus on return type

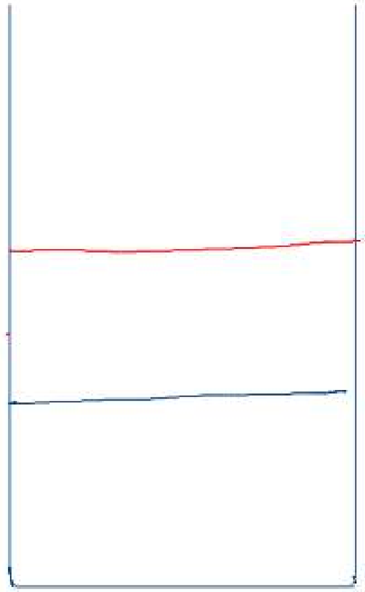
```
p.s.v main(){
    int a=10;
    int b=20;
    int mul = multiply(a, b);
    Syso(mul);
}
p.s int multiply(int b, int a){
    int mul = b*a;
    return mul;
}
```

a → 10, b → 20
10 → b, 20 → a



200

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

    int i =1;
    while(i<=n){
     ① int a = scn.nextInt();
     ② int b = scn.nextInt();
     ③ multiply(a,b);

     ④ i++;
    }
    /* Enter your code here. Read input from STDIN. Print output to STDOUT. Y
}

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



6

72

Q Swap without using third variable.

a = 20;
b = 10;

op = a = 10
b = 20;

①
a = ~~20~~ ~~30~~ 10
b = ~~10~~ 20

a = a + b;
b = a - b;
a = a - b;

with third variable

a = 20
b = 10

temp = 20;

a = b;
b = temp;

syso(a)
syso(b);

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

    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);
    /* Enter your code here. Read input from STDIN. Print
}
```

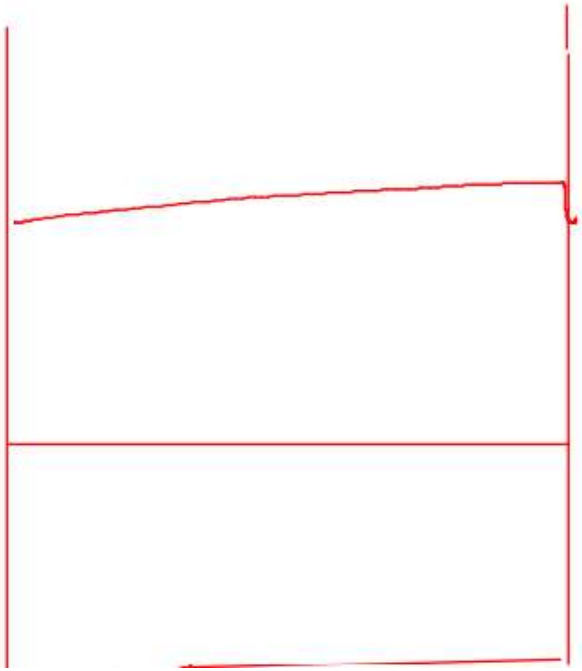
x = 10
y = 20

o/p = x = 20
y = 10

c = 10;
x = 20;
y = 10;

Solution

```
public static void main(String[] args) {

    Scanner scn = new Scanner(System.in);
    int x = scn.nextInt();
    int y = scn.nextInt();

    Swap(x,y);
    /* Enter your code here. Read input from STDIN. Prin
}

public static void Swap(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);
}
```

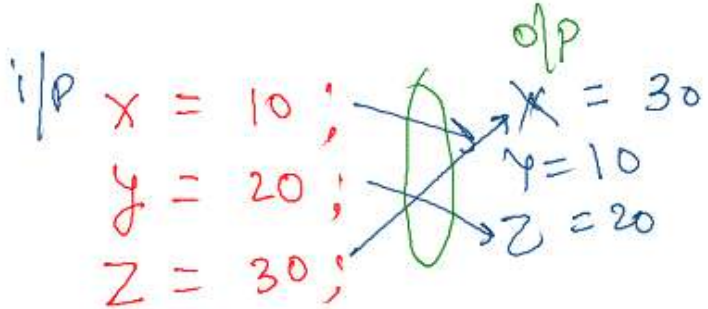


o/p.
c = 10
x = 20
y = 10
x = 20
y = 10

Solution

Qus!

x to y, y to z, z to x

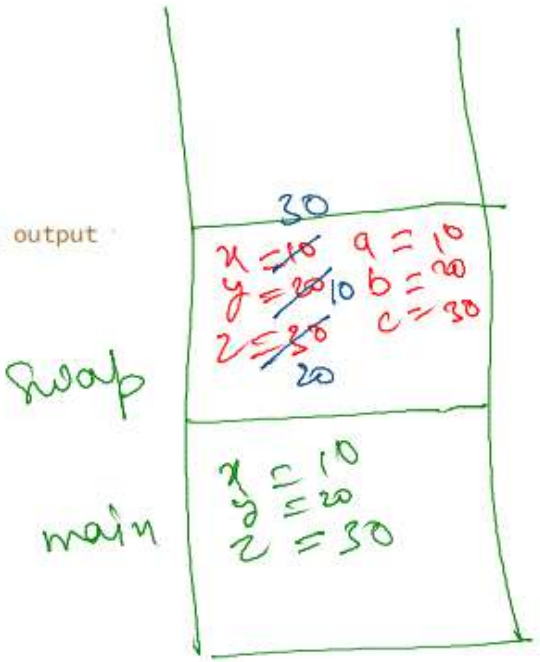



```
int a = x;
int b = y;
int c = z;
```

```
x = c;
y = a;
z = b;
```

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

    Swap(x,y,z);
    /* Enter your code here. Read input from STDIN. Print output
}

public static void Swap(int x,int y, int z){
    int a = x;
    int b = y;
    int c = z;
    y=a;
    z=b;
    x=c;
    System.out.println(x);
    System.out.println(y);
    System.out.println(z);
}
```

30
10
20



Digits

Qu

a = 5

b = 4

84

= 5*10 + 4 = 54

84 54

```
public class Solution {

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

        int i = 1;
        while(i<=n){
            int x = scn.nextInt();
            int y = scn.nextInt();
            int ans = x*10+y;
            System.out.println(ans);
            i++;
        }


        /* Enter your code here. Read input from STDIN. Print outp
```

n = 2

i = 1 x 3

x = 9

y = 5

ans = 98

45, 98

Q. Print digits

n = 932

o/p = 2
3
9

```
while(n>0){
  int rem = n%10;
  syso(rem);
  n = n/10
}
```

Q. Reverse digits

n = 432

o/p = 234

2x100 + 3x10 + 4x1 = 234

```
int pow = 100; int ans = 0;
while(n>0){
   int rem = n%10;   // 2
   ans = ans + rem*pow;
   pow = pow/10;
   n = n/10;
}
```

rem = %
qu = /

4/10 = 4

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

    int i =1;
    while(i<=n){
      int val = scn.nextInt();
      int pow =100;
      int ans =0;
      while(val>0){
        int rem = val%10;
        ans = ans + rem * pow;
        pow /=10;
        val =val/10;
      }
      System.out.println(ans);
      i++;
    }
    /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your cla
}
```

val = 432 43 4 0

pow = 100 10 1 0

ans = 0 200 230

rem = 2 3 4

432%10 = 2

43%10 = 3

0 + 2*100 = 200

200 + 3*10 = 200+30 = 230

230 + 4*1 = 230 + 4 = 234

432 ⇒ 234 ans

Qu Make digit digits

1
2
3
4
5

⇒ o/p 12345

0*10+1 = 1*10+2 = 12*10+3 = 123*10+4

= 1234*10+5

= 12345 sol

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

    int i =1;
    int ans =0;
    while(i<=n){
      int val = scn.nextInt();
      ans = ans *10+val;
      i++;
    }

    System.out.println(ans);
    /* Enter your code here. Read input from STDIN. Print outpu
}
```

9
8
6
3

i = 1 2 3 4 5, n = 4

val = 9 8

ans = 0 98 986 9863

0*10+9 = 9

9*10+8 = 98

98*10+6 = 986

986*10+3 = 9863 Ans