

# # functions Related Questions

## Find sum using a function

Problem

Submissions

Leaderboard

Discussions

The process goes like:

You have to first take input of two numbers x and y as an integer input.

Then make a function `findSum(int x, int y)`, which takes in these two integers as parameters and prints the final sum.

The diagram illustrates the flow of data from user input to the execution of the `findSum` function and finally to the output. It shows the following steps:

- User Input:** The user inputs `5` and `10`.
- Scanner:** These inputs are read by a `Scanner` object.
- Parameters:** The values `5` and `10` are passed as parameters to the `findSum` function.
- Function Call:** The `findSum` function is called with parameters `x = 5` and `y = 10`.
- Calculation:** Inside the `findSum` function, the sum `c = x + y` is calculated.
- Return:** The function returns the value `c = 15`.
- Main Method:** The `main` method then prints the result `ans = 15`.
- Output:** The final output is `15`.

```
static int findSum(int x, int y){  
    int c = x+y; // 5+10 = 15  
    return c;  
}  
  
public static void main(String[] args) {  
    /* Enter your code here. Read input from Scanner */  
    Scanner scn = new Scanner(System.in);  
    int x = scn.nextInt(); 5  
    int y = scn.nextInt(); 10  
    int ans = findSum(x,y);  
    System.out.println(ans); // → 15  
}  
  
...  
  
static void findSum(int x, int y){  
    int c = x+y;  
    System.out.println(c);  
}  
  
public static void main(String[] args) {  
    /* Enter your code here. Read input from Scanner */  
    Scanner scn = new Scanner(System.in);  
    int x = scn.nextInt();  
    int y = scn.nextInt();  
    findSum(x,y);  
}
```

# Find product of the two numbers using function.

Problem

Submissions

Leaderboard

Discussions

The process goes like:

First take in two integer inputs x and y.

Then make a function `findProduct(int x, int y)` which takes in an integer as an input then print the product of x and y.

*int → return  
int ans → main → catching the return value.*

```
static int findProduct(int x , int y){  
    int c = x * y; → 50  
    return c; ✓  
}  
  
public static void main(String[] args) {  
    /* Enter your code here. Read input from System.in */  
    Scanner scn = new Scanner(System.in);  
    int x = scn.nextInt(); → 5  
    int y = scn.nextInt(); → 10  
    int ans = findProduct(x,y); → 50  
    System.out.println(ans); ✓ → 50  
}
```

```
static void findProduct(int x , int y){  
    int c = x * y;  
    System.out.println(c);  
}
```

```
public static void main(String[] args) {  
    /* Enter your code here. Read input from System.in */  
    Scanner scn = new Scanner(System.in);  
    int x = scn.nextInt();  
    int y = scn.nextInt();  
    findProduct(x,y);  
}
```

# Area and perimeter as double using function

Problem

Submissions

Leaderboard

Discussions

The process goes like:

Take in radius as a double input,

Then make two functions `findArea(double radius)` which returns the area as a double to a double type variable named `doubleArea` and `findPerimeter(double radius)` which returns the perimeter as a double to a double type variable name `doublePerimeter`.

Then in the end print `doubleArea` in one line,

And print `doublePerimeter` in the second line.

$$\text{double } \rightarrow \pi r^2 \rightarrow 3.14$$

*Scn. nextDouble();*

*double →*

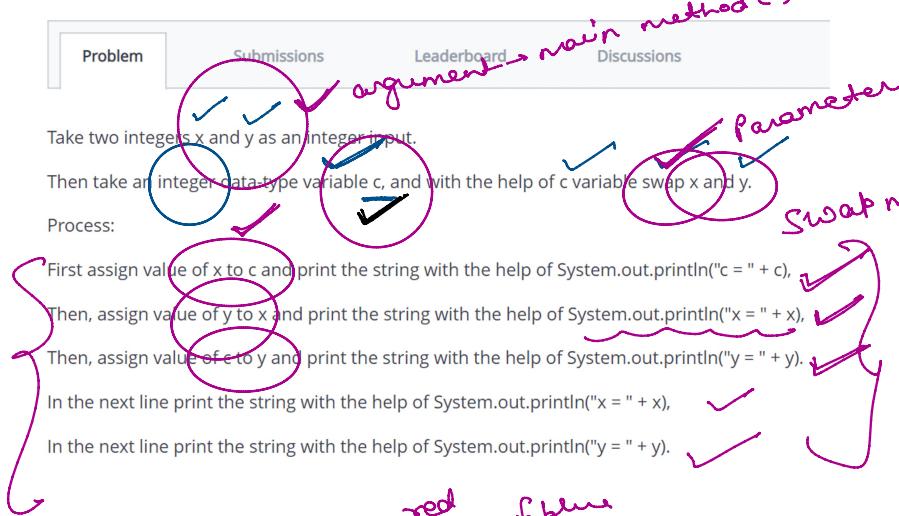
```
static double findArea(double r){  
    double area = (3.14 * r * r);  
    return area;  
}  
static double findPerimeter(double r){  
    double peri = 2 * 3.14 * r;  
    return peri;  
}
```

```

        double area = 3.14 * r * r); ✓
        return area; ✓
    }
    static double findPerimeter(double r){ ✓
        double perimeter = (2 * 3.14 * r); ✓
        return perimeter;
    }
    public static void main(String[] args) {
        /* Enter your code here. Read input from STDIN */
        Scanner scn = new Scanner(System.in);
        double r = scn.nextDouble(); → 2
        double doubleArea = findArea(r); ✓
        double doublePerimeter = findPerimeter(r); ✓
        System.out.println(doubleArea); ✓
        System.out.println(doublePerimeter); → 2
    }
}

```

## Swap x and y



```

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); ✓
}

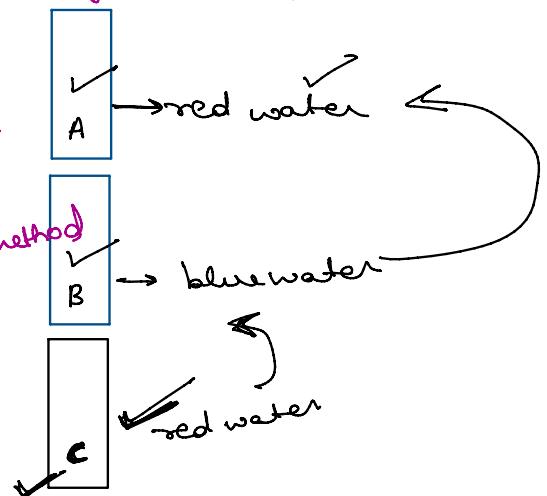
```

```

public static void main(String[] args) {
    /* Enter your code here. Read input from STDIN */
    Scanner scn = new Scanner(System.in);
    int x = scn.nextInt(); ✓
    int y = scn.nextInt(); ✓
    swap(x,y); ✓
}

```

Eg : Glass of water



red      blue



## Swap x y z

Problem Submissions Leaderboard Discussions

Take in three integer inputs x, y and z. Assign the value of x to y, y to z, z to x. Then print the value of x, y, z in separate lines.

### Input Format

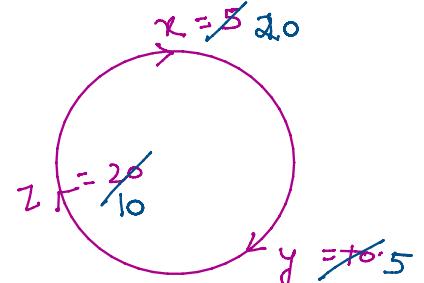
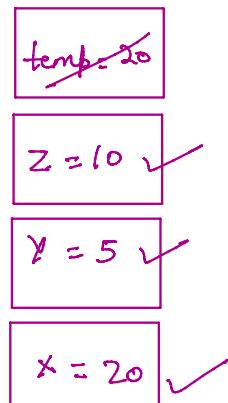
For each test case,

x will be given in the first line, ✓

y will be given in the second line, ✓

z will be given in the third line. ✓

```
static void swap(int x, int y, int z){  
    int temp = z;  
    z = y;  
    y = x;  
    x = temp;  
    System.out.println(x);  
    System.out.println(y);  
    System.out.println(z);  
}  
  
public static void main(String[] args) {  
    /* Enter your code here. Read input from  
     * Scanner scn = new Scanner(System.in);  
     * int x = scn.nextInt(); → 5  
     * int y = scn.nextInt(); → 10  
     * int z = scn.nextInt(); → 20  
     */  
    swap(x,y,z);  
}
```



## Find GCD 3

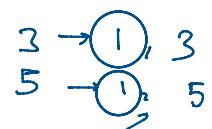
Greatest Common Divisor

Problem Submissions Leaderboard Discussions

Take two integer inputs x and y. Then print the gcd of these two numbers as an integer output.

Sample Input 1

300  
20  
4



Sample Output 1

15

$$20 \% 15 = 0 \quad \checkmark$$

7  
Sample Output 1  
20  
 $y(20) \rightarrow (1) 2, 4, 5, 10, (20)$   
 $x \% i == 0 \checkmark$   
 $\downarrow \leftarrow \text{smaller}(x, y) \quad y \% i == 0 \checkmark$

```
static int gcd(int x, int y){  
    int gcd = 1;  
    for(int i = 2; i <= x && i <= y; i++){  
        if(x % i == 0 && y % i == 0){  
            gcd = i;  
        }  
    }  
    return gcd;  
}  
  
public static void main(String[] args) {  
    /* Enter your code here. Read input from Scanner scn = new Scanner(System.in);  
    int x = scn.nextInt(); 100  
    int y = scn.nextInt(); 35  
  
    int ans = gcd(x,y);  
    System.out.println(ans);
```

## Sample Input 0

100       $5 \rightarrow 1, 5 \checkmark$   
 $9 \rightarrow 1, 3, 9$   
 $100 \rightarrow 1, 2, 4, 5, 10, 20, 25, 50, 100, 35$   
 $35 \rightarrow 1, 5, 7, 35$   
 $\text{gcd} = 5 \checkmark$   
 $i = 2, 3, 4, 5, 6$

## Sample Output 0

5

## Given x and y, print xy

Problem Submissions Leaderboard Discussions

Take x and y digits as integer inputs and then form a number  $xy$  from it and then finally print that number.

for eg. if you are given 3 and 4, then you have to form the number 34 from it and then finally print the number 34.

$$x \rightarrow 5 * 10 \\ y \rightarrow 3 \\ - xy = 53 \\ \text{ten's place} \quad \text{one's place}$$

$$x * y = 15$$

$$x \rightarrow 0 \text{ to } 9 \\ y \rightarrow 0 \text{ to } 9$$

$$x * 10 + y.$$

$$xy \rightarrow x = 3 \quad - \quad y = 4 \quad 10 \\ \text{tens place} \quad \text{one's place}$$

$$1 \overset{1}{y} \quad y = 4 \quad \begin{matrix} \uparrow & \text{ones place} \\ \text{tens place} \end{matrix}$$

100 place  
 ↑      ↑ 10 place  
 3      5      4      ones place

$$x \ y \ z \quad \Rightarrow \left\{ \begin{array}{l} x * 100 + y * 10 + z * 1 \end{array} \right\}$$

$$\begin{array}{c} \text{1000's} \\ | \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow \\ w \ x \quad y \quad z \quad \text{ones} \\ | \quad \downarrow \quad \downarrow \quad \downarrow \quad | \\ 5 \quad 3 \quad 2 \quad ] \end{array} \implies \left\{ w * 1000 + x * 100 + y * 10 + z + 1 \right\}$$

5301

```
static int x_y(int x , int y){  
    int ans = x * 10 + y ;  
    return ans;  
}
```

→ 36  
one's

$$0 \leq x < q$$

```
public static void main(String[] args) {  
    /* Enter your code here. Read input from  
    Scanner scn = new Scanner(System.in);  
    int x = scn.nextInt(); 3  
    int y = scn.nextInt(); 6  
  
    int result = x_y(x,y);  
    System.out.println(result); → 36
```

$$0 \leq y \leq 9$$