

# C++ Math fdim()

The function calculates the positive difference between two numbers.

## Conditions :

Consider two numbers 'x' and 'y' :

**If(x>y):** It returns (x-y);

**If(y>x):** It returns zero.

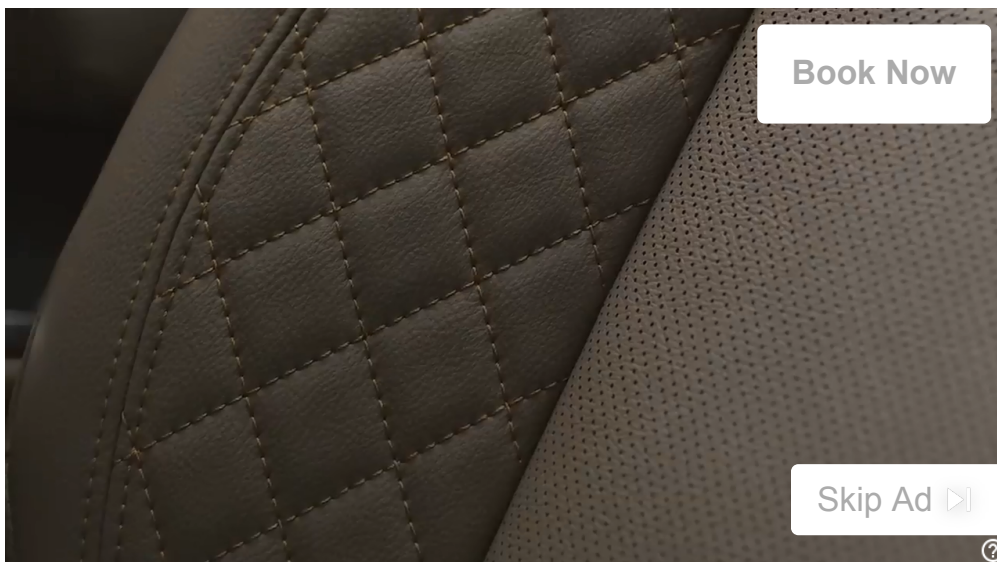
## Syntax

```
float fdim(float x, float y);  
double fdim(double x, double y);  
long double fdim(long double x, long double y);  
promoted fdim(Arithmetic x, Arithmetic y);
```

Note: If any argument has an integral type, then it is cast to double. If any other argument is long double, then it is cast to long double.

## Parameter

**(x,y):** The values whose difference is to be calculated.



## Return value

It returns the positive difference between x and y.

↑ SCROLL TO TOP

Let's see a simple example when the value of 'x' is greater than the value of 'y'.

```
#include <iostream>
#include<math.h>
using namespace std;
int main()
{
    float x=9.4;
    float y=8.3;
    std::cout << "Values of x and y are :"<<x<<","<<y<< std::endl;
    cout<< "Positive difference between two numbers is :"<<fdim(x,y);
    return 0;
}
```

### Output:

```
Values of x and y are :9.4,8.3
Positive difference between two numbers is :1.1
```

In this example, value of x is greater than the value of y and fdim() function finds the positive difference between x and y.

## Example 2

Let's see a simple example when the value of 'x' is less than the value of 'y'.

```
#include <iostream>
#include<math.h>
using namespace std;
int main()
{
    double x=3.3;
    float y= 4.7;
    std::cout << "Values of x and y are :"<<x<<","<<y<< std::endl;
    cout<< "Positive difference between two numbers is :"<<fdim(x,y);
    return 0;
}
```

```
Values of x and y are :3.3,4.7  
Positive difference between two numbers is :0
```

In this example, value of x is less than the value of y so fdim() function returns zero value.

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