

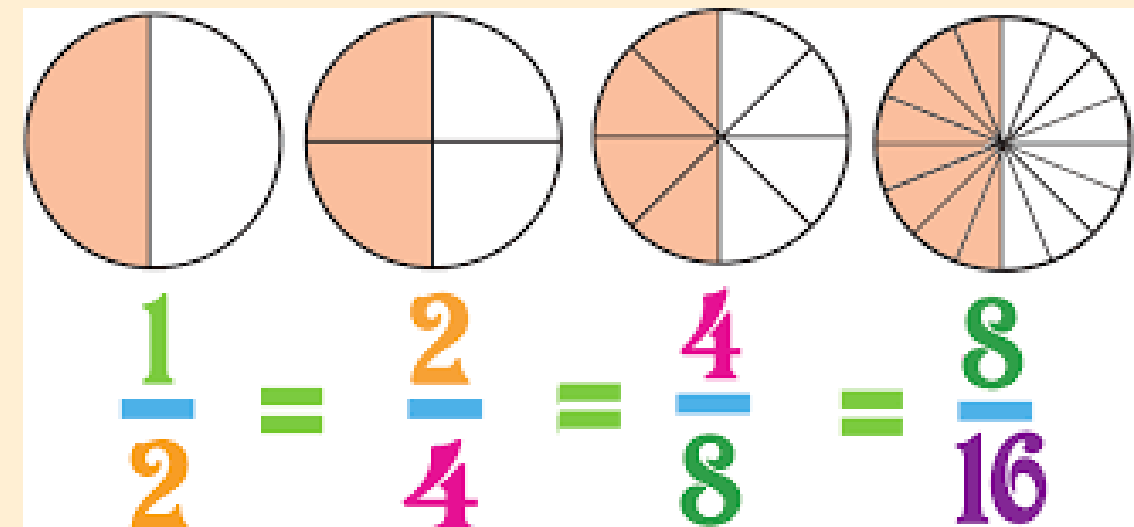
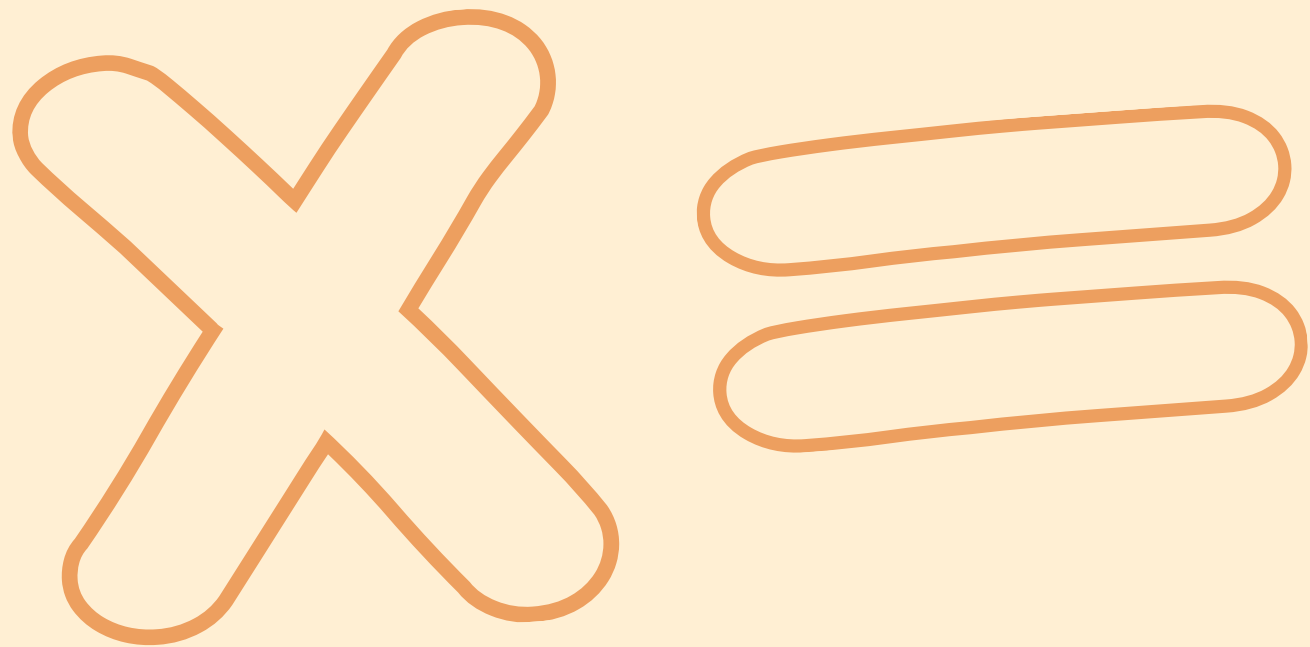
# 13.

Berilgan  $a$  va  $b$  sonlar orasidagi tub sonlarning o'rta arifmetig qiymatini hisoblovchi funksiya tuzing.

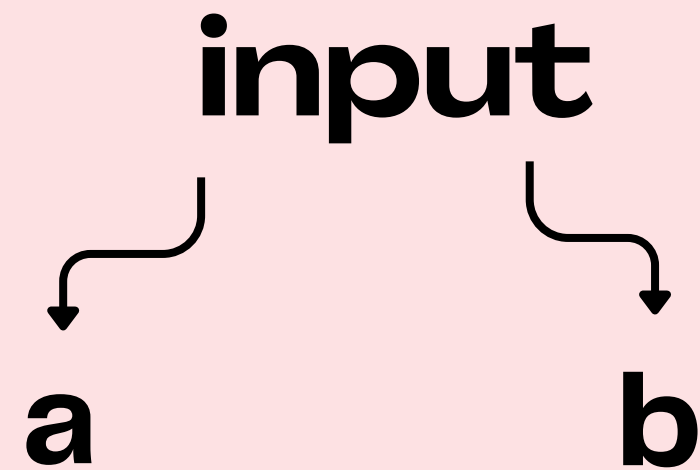


# Misol formulasi:

$$\frac{a + b + c + \dots + n}{n} = n$$



**Ushbu C++ dasturi berilgan a va b oraliqdagi tub sonlarni topadi va ularning o'rta arifmetik qiymatini hisoblaydi. Keling, kodni qadam-baqadam tahlil qilamiz:**



```
#include <iostream>
```

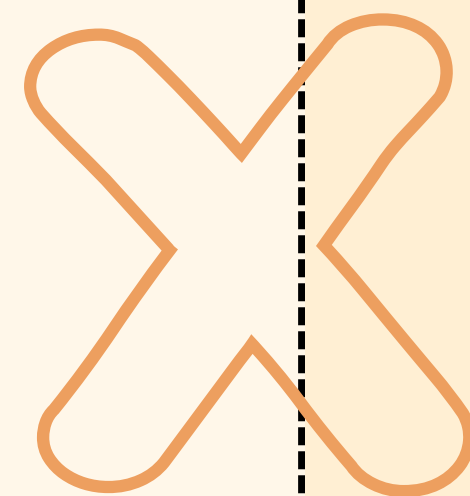
- Vazifasi:
  - Ma'lumotni kiritish (cin) va ekranga chiqarish (cout) uchun ishlatiladi.
- Qo'llanishi:
  - cin >> a va cin >> b orqali foydalanuvchidan a va b qiymatlari olinadi.
  - cout yordamida natijalar ekranga chiqariladi.

```
#include <cmath>
```

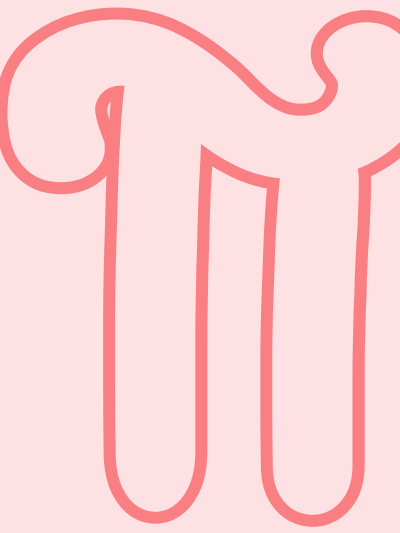
- Vazifasi:
  - Matematik funksiyalar, masalan, sqrt() (kvadrat ildiz) funksiyasidan foydalanish uchun.

# Tub sonni tekshiruvchi funksiya

```
bool isPrime(int n) {  
    if (n <= 1) return false; // Manfiy sonlar va 1 tub emas  
    for (int i = 2; i <= sqrt(n); i++) { // 2 dan sqrt(n) gacha  
        bo'linuvchilarni tekshirish  
        if (n % i == 0) return false; // Bo'linadigan son topilsa, tub emas  
    }  
    return true; // Aks holda tub  
}
```



# Yuqoridagi misol uchun yechim:



```
#include <cmath>
#include <iostream>
using namespace std;

bool isPrime(int n) {
    if (n <= 1)
        return false;
    for (int i = 2; i <= sqrt(n); i++) {
        if (n % i == 0)
            return false;
    }
    return true;
}

double primeAverage(int a, int b) {
    int sum = 0, count = 0;
    for (int i = min(a, b); i <= max(a, b); i++) {
        if (isPrime(i)) {
            sum += i;
            count++;
        }
    }
    return count > 0 ? (double)sum / count : 0;
}

int main() {
    int a, b;
    cout << "a ni kiriting: ";
    cin >> a;
    cout << "b ni kiriting: ";
    cin >> b;

    double result = primeAverage(a, b);
    if (result == 0) {
        cout << "Berilgan oraliqda tub sonlar yo'q." << endl;
    } else {
        cout << "Tub sonlarning o'rta arifmetigi: " << result << endl;
    }
    return 0;
}
```

```
main.cpp  >_ Console  ×  +

Run

a ni kiriting: 4
b ni kiriting: 6
Tub sonlarning o'rta arifmetigi: 5
```