

# BÀI 1

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n;
```

```
    cin >> n;
```

```
    cout << n*(n+1)/2;
```

```
    return 0;
```

```
}
```

## Bài 2

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{  
    int n, S(0);
```

```
    cin >> n;
```

```
    for (int i = 1; i <= n; i++) S += i * i;
```

```
    cout << S;
```

```
  
    return 0;
```

## Bài 3

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{  
    int n;
```

```
    float S(0);
```

```
    cin >> n;
```

```
    for (float i = 1; i <= n; i++) S += 1 / i;
```

```
    cout << S;
```

```
  
    return 0;
```

# Bài 4

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n;
```

```
    cin >> n;
```

```
    float S(0);
```

```
    for (int i = 1; i <= n; i++) S += 1. / (2 * i);
```

```
    cout << S;
```

```
    return 0;
```

```
}
```

# Bài 5

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n;
```

```
    cin >> n;
```

```
    float S(0);
```

```
    for (int i = 0; i < n; i++) S += 1. / (2 * i + 1);
```

```
    cout << S;
```

```
    return 0;
```

```
}
```



## Bài 6

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n;
```

```
    cin >> n;
```

```
    float s(0);
```

```
    for(int i=1; i<=n; i++) s += 1/(i*(i+1));
```

```
    cout << s;
```

```
    return 0;
```

```
}
```

## Bài 7

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n;
```

```
    cin >> n;
```

```
    float s(0);
```

```
    for(that i=1; i<=n; i++) s += i/(i*(i+1));
```

```
    cout << s;
```

```
    return 0;
```

```
}
```

Bài 8

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n;
```

```
    cin >> n;
```

```
    float S(0);
```

```
    for (float i=0; i<=n; i++) S += (2*i+1)/(2*i+2);
```

```
    cout << S;
```

```
    return 0;
```

```
}
```

Bài 9

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n;
```

```
    cin >> n;
```

```
    int S(1);
```

```
    for (int i=2; i<=n; i++) S *= i;
```

```
    cout << S;
```

```
    return 0;
```

```
}
```

## Bài 10

```
#include <iostream>

using namespace std;

int main()
{
    float x, n, T(1);
    cin >> x >> n;
    for (int i = 1; i <= n; i++) T *= x;
    cout << T;

    return 0;
}
```

## Bài 11

```
#include <iostream>

using namespace std;

int main()
{
    int n, T(1), S(0);
    cin >> n;
    for (int i = 1; i <= n; i++)
    {
        T *= i;
        S += T;
    }
    cout << S;

    return 0;
}
```



Bai 12

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{  
    for(int i=1; i<=n; i++)
```

```
{  
        T = x;
```

```
        S += T;
```

```
    }
```

```
    cout << S;
```

```
    return 0;
```

```
}
```

Bai 13

```
#include <iostream>
```

```
#include <math.h>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    float x, n, S(0);
```

```
    cin >> x >> n;
```

```
    for(int i=2; i<=n; i+=2) S += pow(x, i);
```

```
    cout << S;
```

```
    return 0;
```

```
}
```

Ex 14

```
#include <iostream>
#include <math.h>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
float x, n, S(0);
```

```
cin >> x >> n;
```

```
for (int i = 1; i <= n; i += 2) S += pow(x, i);
```

```
cout << S;
```

```
return 0;
```

```
}
```

Ex 15

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
float n, S(0), S1(0);
```

```
cin >> n;
```

```
for (int i = 1; i <= n; i++)
```

```
{
```

```
    S1 += i;
```

```
    S += 1/S1;
```

```
}
```

```
cout << S;
```

```
return 0;
```

```
}
```



PAI 16

```
#include <iostream>
#include <math.h>

using namespace std;

int main()
{
    float x, n, S(0), S1(0);
    cin >> x >> n;
    for(int i=1; i<=n; i++)
    {
        S+=1;
        S+=pow(x,i)/S1;
    }
    cout << S;

    return 0;
}
```

PAI 17

```
#include <iostream>
#include <math.h>

using namespace std;

int main()
{
    float x, n, S(0), S1(1);
    cin >> x >> n;
    for(int i=1; i<=n; i++)
    {
        S1*=i;
        S+=pow(x,i)/S1;
    }
    cout << S;

    return 0;
}
```

### BÀI 18

```
#include <iostream>
#include <math.h>
```

```
using namespace std;
```

```
int main ()
```

```
{
```

```
float x, n, S(1), S1(1);
```

```
cin >> x >> n;
```

```
for(int i = 1; i <= n; i++)
```

```
{
```

```
    S1 *= i;
```

```
    if (i % 2 == 0) S += pow(x, i) / S1;
```

```
}
```

```
cout << S;
```

```
return 0;
```

```
}
```

### BÀI 19

```
#include <iostream>
#include <math.h>
```

```
using namespace std;
```

```
int main ()
```

```
{
```

```
float x, n, S(1), S1(1);
```

```
cin >> x >> n;
```

```
for(int i = 1; i <= n; i++)
```

```
{
```

```
    S1 *= i;
```

```
    if (i % 2 == 1) S += pow(x, i) / S1;
```

```
}
```

```
cout << S;
```

```
return 0;
```

```
}
```

## BÀI 20

```
#include <iostream>
#include <math.h>

using namespace std;
```

```
int main()
{
    int n;
    cin >> n;
    for (int i = 1; i <= n; i++)
        if (n % i == 0) cout << i << " ";
    return 0;
}
```

## BÀI 21

```
#include <iostream>

using namespace std;

int main()
{
    int n, s(0);
    cin >> n;
    for (int i = 1; i <= n; i++)
        if (n % i == 0) s += i;
    cout << s;
    return 0;
}
```



BA122

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n, s(1);
```

```
    cin >> n;
```

```
    for (int i = 1; i <= n; i++)
```

```
        if (n % i == 0) s += i;
```

```
    cout << s;
```

```
    return 0;
```

```
}
```

BA123

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n, d(0);
```

```
    cin >> n;
```

```
    for (int i = 1; i <= n; i++)
```

```
        if (n % i == 0) d += i;
```

```
    cout << d;
```

```
    return 0;
```

```
}
```

Bai 24

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n;
```

```
    cin >> n;
```

```
    for (int i = 1; i <= n; i++)
```

```
        if (n % i == 0 && i % 2 == 1) cout << i << " ";
```

```
    return 0;
```

```
}
```

Bai 25

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n, s(0);
```

```
    cin >> n;
```

```
    for (int i = 1; i <= n; i++)
```

```
        if (n % i == 0 && i % 2 == 0) s += i;
```

```
    cout << s;
```

```
    return 0;
```

```
}
```

BA1 26

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n, T(1);
```

```
    cin >> n;
```

```
    for(int i=1; i<=n; i++)
```

```
        if(n%i==0 && i%2==1) T*=i;
```

```
    cout << T;
```

```
    return 0;
```

```
}
```

BA1 27

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n, d(0);
```

```
    cin >> n;
```

```
    for(int i=1; i<=n; i++)
```

```
        if(n%i==0 && i%2==0) d++;
```

```
    cout << d;
```

```
    return 0;
```

```
}
```



## Bài 28

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n, s(0);
```

```
    cin >> n;
```

```
    for(int i=1; i<=n; i++)
```

```
        if(n%i==0) s+=i;
```

```
    cout << s;
```

```
    return 0;
```

```
}
```

## Bài 29

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n;
```

```
    cin >> n;
```

```
    for(int i=n; i>=1; i--)
```

```
        if(n%i==0 && i%2==1)
```

```
        {
```

```
            cout << i;
```

```
            break;
```

```
        }
```

```
    return 0;
```

```
}
```

### BÀI 30

```
#include <iostream>
using namespace std;
int main()
{
    int n, s(0);
    cin >> n;
    for(int i=1; i<=n; i++)
        if(n%i==0) s+=i;
    if(s==n) cout << n << " là số hoàn thiện";
    else cout << n << " không phải số hoàn thiện";
    return 0;
}
```

### BÀI 31

```
#include <iostream>
#include <math.h>
using namespace std;
int main()
{
    int n;
    cin >> n;
    int a = sqrt(n);
    if(n<2)
    {
        cout << n << " không phải số nguyên tố";
        exit(0);
    }
    for(int i=2; i<=a; i++)
        if(n%i==0 && n!=2)
        {
            cout << n << " không phải số nguyên tố";
            exit(0);
        }
    cout << n << " là số nguyên tố";
    return 0;
}
```

### Bài 32

```
int main()
{
    int n;
    cin >> n;
    int a = sqrt(n);
    a = a * a;
    if (n == a) cout << n << " là số chính phương";
    else cout << n << " Không phải là số chính phương";
    return 0;
}
```

### Bài 33

```
int main()
{
    int n;
    float S(0);
    cin >> n;
    for (int i = 1; i <= n; i++) S = sqrt(2 + S);
    cout << S;
    return 0;
}
```



### Bài 34

```
int main()
{
    int n;
    cin >> n;
    float S(0);
    for(int i = 1; i <= n; i++) S = sqrt(i + S);
    cout << S;
    return 0;
}
```

### Bài 35

```
int main()
{
    int n;
    float S(0);
    cin >> n;
    for(int i = n; i >= 1; i--) S = sqrt(i + S);
    cout << S;
    return 0;
}
```

### Bài 36

```
int main()
{
    int n, T(1);
    float S(0);
    cin >> n;
    for (int i = 1; i <= n; i++)
    {
        T *= i;
        S = sqrt(T + S);
    }
    cout << S;
    return 0;
}
```

### Bài 37

```
int main()
{
    int n;
    float S(0);
    cin >> n;
    for (float i = 2; i <= n; i++) S = pow(i + S, 1/i);
    cout << S;
    return 0;
}
```

BA138

```
int main()
{
    int n;
    cin >> n;
    float S(0);
    for(float i=1; i<=n; i++) S = pow(i+S, 1/(i+1));
    cout << S;
    return 0;
}
```

BA139

```
int main()
{
    int n, T(1);
    float S(0);
    cin >> n;
    for(float i=1; i<=n; i++)
    {
        T *= i;
        S = pow(T+S, 1/(i+1));
    }
    cout << S;
    return 0;
}
```



BAI 90

```
int main()
{
    int n, T(1);
    float x, s(0);
    cin >> x >> n;
    for(float i=1; i<=n; i++)
    {
        T *= x;
        s = sqrt(s + T);
    }
    cout << s;
    return 0;
}
```

BAI 91

```
int main()
{
    int n;
    float s(2);
    cin >> n;
    if (n < 1)
    {
        cout << 0;
        exit(0);
    }
    for(float i=1; i<=n; i++) s = 1 + 1/s;
    cout << s - 1;
    return 0;
}
```

Bài 92

```
int main()
{
    int n;
    cin >> n;
    int a = n * (n + 1) / 2;
    for (int i = n; i > 0; i--)
    {
        a -= i;
        if (a < n)
        {
            cout << i - 1;
            exit(0);
        }
    }
    return 0;
}
```

Bài 93

```
int main()
{
    int n, d(0);
    cin >> n;
    while (n > 0)
    {
        d += 1;
        n /= 10;
    }
    cout << d;
    return 0;
}
```

Bài 44

```
int main()
{
    int n, S(0);
    cin >> n;
    while (n > 0)
    {
        S += n % 10;
        n /= 10;
    }
    cout << S;
    return 0;
}
```

Bài 45

```
int main()
{
    int n, T(1);
    cin >> n;
    while (n > 0)
    {
        T *= n % 10;
        n /= 10;
    }
    cout << T;
    return 0;
}
```



BÀI 46

```
int main()
{
    int n, d(0);
    cin >> n;
    while(n > 0)
    {
        if((n%10)%2 == 1) d++;
        n /= 10;
    }
    cout << d;
    return 0;
}
```

BÀI 47

```
int main()
{
    int n, s(0);
    cin >> n;
    while(n > 0)
    {
        if((n%10)%2 == 0) s += n%10;
        n /= 10;
    }
    cout << s;
    return 0;
}
```

### Bài 98

```
int main()
{
    int n, T(1);
    cin >> n;
    while(n > 0)
    {
        if((n%10)%2 == 1) T *= n%10;
        n /= 10;
    }
    if(T == 1)
    {
        cout << 0;
        exit(0);
    }
    cout << T;
    return 0;
}
```

### Bài 99

```
int main()
{
    int n;
    cin >> n;
    while(n > 9) n /= 10;
    cout << n;
    return 0;
}
```

# Bài 50

```
int main()
{
    int n;
    cin >> n;
    while(n%10 == 0) n /= 10;
    while(n > 0)
    {
        cout << n%10;
        n /= 10;
    }
    return 0;
}
```

# Bài 51

```
int main()
{
    int n;
    cin >> n;
    int maxN = n%10;
    while(n > 0)
    {
        n /= 10;
        if(n%10 > maxN) maxN = n%10;
    }
    cout << maxN;
    return 0;
}
```



# Bài 52

```
int main()
```

```
{
```

```
    int n, minN(0);
```

```
    cin >> n;
```

```
    while (n > 0)
```

```
    {
```

```
        if (n % 10 < minN) minN = n % 10;
```

```
        n /= 10;
```

```
    }
```

```
    cout << minN;
```

```
    return 0;
```

```
}
```

# Bài 53

```
int main()
```

```
{
```

```
    int n, d(1);
```

```
    cin >> n;
```

```
    int maxN = n % 10;
```

```
    while (n > 0)
```

```
    {
```

```
        n /= 10;
```

```
        if (n % 10 == maxN) d++;
```

```
        if (n % 10 > maxN)
```

```
        {
```

```
            maxN = n % 10;
```

```
            d = 1;
```

```
        }
```

```
    }
```

```
    cout << d;
```

```
    return 0;
```

```
}
```

DA154

```
int main()
{
    int n, min(10), d(0);
    cin >> n;
    while (n > 0)
    {
        if (n % 10 == min(10)) d++;
        if (n % 10 < min(10))
        {
            min(10) = n % 10;
            d = 1;
        }
        n /= 10;
    }
    cout << d;
    return 0;
}
```

DA155

```
int main()
{
    int n, d(0);
    cin >> n;
    int a = n;
    while (n > 9) a /= 10;
    while (n > 0)
    {
        if (n % 10 == a) d++;
        n /= 10;
    }
    cout << d;
    return 0;
}
```

Bài 56

```
int main()
{
    int n; cin >> n;
    while (n > 0)
        if ((n % 10) % 2 == 1) n /= 10;
        else
        {
            cout << "no";
            exit(0);
        }
    cout << "yes";
    return 0;
}
```

Bài 57

```
int main()
{
    int n;
    cin >> n;
    while (n > 0)
        if ((n % 10) % 2 == 0) n /= 10;
        else
        {
            cout << "no";
            exit(0);
        }
    cout << "yes";
    return 0;
}
```



### BÀI 58

```
int main()
{
    int n;
    cin >> n;
    while (n > 0)
        if ((n % 10) % 2 == 0) n /= 10;
        else
        {
            cout << "no";
            exit(0);
        }
    cout << "yes";
    return 0;
}
```

### BÀI 59

```
int main()
{
    int n, n1(0);
    cin >> n;
    int a = n;
    do
    {
        n1 = n * 10 + a % 10;
        a /= 10;
    } while (a != 0);
    cout << (n == n1 ? "yes" : "no");
    return 0;
}
```

BAI 10

```
int main()
{
    int n, so(10);
    cin >> n;
    while(n > 0)
        if (n % 10 < so)
        {
            so = n % 10;
            n /= 10;
        }
    else
    {
        cout << "no";
        exit(0);
    }
    cout << "yes";
    return 0;
}
```

BAI 6A

```
int main()
{
    int n, so(-1);
    cin >> n;
    while(n > 0)
        if (n % 10 > so)
        {
            so = n % 10;
            n /= 10;
        }
    else
    {
        cout << "no";
        exit(0);
    }
    cout << "yes";
    return 0;
}
```

## BÀI 62

```
int ucln (int a, int b)
{
    if (b == 0) return a;
    return ucln (b, a % b);
}
```

```
int main ()
```

```
{
    int a, b;
    cin >> a >> b;
    cout << ucln (a, b);
    return 0;
}
```

## BÀI 63

```
int ucln (int a, int b)
```

```
{
    if (b == 0) return a;
    if return (b, a % b);
}
```

```
int main ()
```

```
{
    int a, b;
    cin >> a >> b;
    cout << (a * b) / ucln (a, b);
    return 0;
}
```



# Bài 64

```
int main()
{
    float a, b;
    cin >> a >> b;
    if (a == 0) cout << ((b != 0) ? "Vo nghiem" : "Vo song nghiem");
    else cout << "x = " << (b == 0 ? 0 : -b/a);
    return 0;
}
```

# Bài 65

```
void ptbac1(float a, float b)
{
    if (a == 0) cout << (b != 0 ? "VN" : "VSN");
    else cout << "x = " << (b == 0 ? 0 : -b/a);
}

int main()
{
    float a, b, c;
    cin >> a >> b >> c;
    if (a == 0) ptbac1(b, c);
    else
    {
        float delta = b*b - 4*a*c;
        if (delta < 0) cout << "VN";
        if (delta == 0) cout << "x = " << -b/(2*a);
        if (delta > 0) cout << "x1 = " << (-b + sqrt(delta))/(2*a)
            << "\nx2 = " << (-b - sqrt(delta))/(2*a);
    }
    return 0;
}
```



BÀI 66

```
float x, x1, x2;
int k(1); // kiểm tra số lượng nghiệm
void ptbac1(float a, float b)
{
    if(a == 0)
    {
        cout << (b != 0 ? "VN" : "VSN");
        exit(0);
    }
    else x = -b/a;
}

void ptbac2(float a, float b, float c)
{
    if(a == 0) ptbac1(b, c);
    else
    {
        float delta = b*b - 4*a*c;
        if(delta < 0)
        {
            cout << "VN";
            exit(0);
        }
        if(delta == 0) x = -b/(2*a);
```

```
        if(delta > 0)
        {
            x1 = (-b + sqrt(delta))/(2*a);
            x2 = (-b - sqrt(delta))/(2*a);
            k = 2;
        }
    }

int main()
{
    float a, b, c;
    cin >> a >> b >> c;
    ptbac2(a, b, c);
    if(k == 1) printf("x < 0? \"VN\" : x == 0? \"x1 = %f \n x2 = %f\", sqrt(x), -sqrt(x));
    else // k = 2
    {
        // trường hợp 3 nghiệm
        if(x1 == 0)
        {
            printf("x2 < 0? \"x = 0\". \"x1 = 0 \n x2 = %f \n x3 = %f\", sqrt(x2), -sqrt(x2));
            exit(0);
        }
    }
}
```

```

if(x2==0)
{
    printf("x1 < 0 ? x = 0 : x1 = 0 \n x2 = %f \n x3 = %f",
           sqrt(x1), -sqrt(x1));
    exit(0);
}
//trường hợp 0, 2, 4 nghiệm
if(x1 < 0 && x2 < 0)
{
    cout << "VN";
    exit(0);
}
if(x1 > 0 && x2 > 0) printf("x1 = %f \n x2 = %f \n x3 = %f \n x4 = %f",
                             sqrt(x1), sqrt(x1), sqrt(x2), -sqrt(x2));
else if(x1 < 0) printf("x1 = %f \n x2 = %f", sqrt(x1), -sqrt(x1));
else printf("x1 = %f \n x2 = %f", sqrt(x1), -sqrt(x1));
}
return 0;

```

## Bài 67

```

int main()
{
    float s, x, n;
    cin >> x >> n; s = 0;
    for(int i = 1; i <= n; i++) s += pow(x, i) * pow(-1, i+1);
    cout << s;
    return 0;
}

```

### Bài 68

```
int main()
{
    float s(0), x, n;
    cin >> x >> n;
    for (int i = 1; i <= n; i++) s += pow(x, 2*i) * pow(-1, i);
    cout << s;
    return 0;
}
```

### Bài 69

```
int main()
{
    float s(0), x, n;
    cin >> x >> n;
    for (int i = 0; i <= n; i++) s += pow(x, 2*i + 1) * pow(-1, i);
    cout << s;
    return 0;
}
```

### BÀI 70

```
int main()
{
    int n;
    float s(0);
    cin >> n;
    for (int i = 1; i <= n; i++) s = pow(-1, i + 1) / (i * (i + 1) / 2);
    cout << s;
    return 0;
}
```

### BÀI 71

```
int main()
{
    float x, n, s(0);
    cin >> x >> n;
    for (int i = 1; i <= n; i++) s = pow(-1, i) * pow(x, i) / (i * (i + 1) / 2);
    cout << s;
    return 0;
}
```



BÀI 72

```
int main()
```

```
{
```

```
float x, n, s(0), gt(1);
```

```
cin >> x >> n;
```

```
for(int i=1; i<=n; i++)
```

```
{
```

```
gt *= i;
```

```
s += pow(-1, i) * pow(x, i) / gt;
```

```
}
```

```
cout << s;
```

```
return 0;
```

```
}
```

BÀI 73

```
int main()
```

```
{
```

```
float x, n, s(0), gt(1);
```

```
cin >> x >> n;
```

```
for(int i=0; i<=n; i++)
```

```
{
```

```
gt *= 2 * i * (2 * i - 1);
```

```
if(gt == 0) gt = 1;
```

```
s += pow(-1, i+1) * pow(x, 2 * i) / gt;
```

```
}
```

```
cout << s;
```

```
return 0;
```

```
}
```

## BÀI 74

```
int main()
{
    float x, n, s(1), gt(1);
    cin >> x >> n;
    for(int i=0; i<=n; i++)
    {
        gt *= 2*i*(2*i+1);
        if(gt==0) gt=1;
        s += pow(-1, i+1) * pow(x, 2*i+1) / gt;
    }
    cout << s;
    return 0;
}
```

## BÀI 75

```
bool check2(int n)
{
    if(n<=0) return false;
    if(n==1) return true;
    if(n%2==0) return check2(n/2);
    else return false;
}

int main()
{
    int n;
    cin >> n;
    cout << (check2(n) ? "Yes" : "No");
    return 0;
}
```

BA176

```
int main()
```

```
{
```

```
    int n;
```

```
    cin >> n;
```

```
    bool K = true;
```

```
    while (n > 1)
```

```
        if (n % 3 == 0) n /= 3;
```

```
        else
```

```
        {
```

```
            K = false;
```

```
            break;
```

```
        }
```

```
    if (n != 1) K = false;
```

```
    cout << (K ? "Yes" : "No");
```

```
    return 0;
```

```
}
```