

# ĐÁP ÁN 50 ĐỀ THỰC HÀNH TIN ĐẠI CƯƠNG

## ĐỀ 1

### 1.1

```
#include <stdio.h>
#include <conio.h>
int kt(float n) {
    if (n < 2 ) return 0;
    if (n == (int) n) {
        for ( int i =2 ; i*i <= n ; i++)
            if ((int) n%i == 0) return 0;
        return 1;
    }
    else return 0;
}
main (){
    float n;
    printf ("Nhap n = ");
    scanf ("%f",&n);
    if (kt(n)) printf ("La so nguyen to");
    else printf ("Khong phai la so nguyen to");
    return 0;
}
```

### 1.2

```
#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f",&a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f",a[i]);
    printf ("\n");
}
int kt(float n) {
    int i;
    if (n<2) return 0;
    if (n == (int) n ) {
        for (i=2; i*i<=n; i++) if ((int) n%i==0) return 0;
        return 1;
    }
}
```

```

        else return 0;
    }
    void SNT(float a[], int n) {
        for (int i=0; i<n; i++) if ( kt(a[i]) ) printf ("%6.2f",a[i]);
    }
    main ( ) {
        int n;
        do {
            printf ("Nhap n: ");
            scanf ("%d",&n);
            if (n<10) printf ("Nhap lai n>=10:\n");
        }
        while (n<10);
        float a[n];
        printf ("Nhap mang: \n");
        nhap(a,n);
        printf ("Cac phan tu cua mang la: ");
        xuat(a,n);
        printf("Cac so nguyen to trong mang la: ");
        SNT(a,n);
    }
    getch( );
    return 0;
}

```

## ĐỀ 2:

### 2.1

```

#include <stdio.h>
#include <conio.h>
int kt(float n) {
    int i; float s=0;
    if (n == (int) n) {
        for (i=1; i<n; i++) if ((int) n%i==0) s+=i;
        return (s==n);
    }
    else return 0;
}
main () {
    float n;
    printf ("Nhap n: ");
    scanf ("%f",&n);
    if ( kt(n) ) printf ("La so hoan hao");
    else printf ("Khong phai la so hoan hao");
    return 0;
}

```

}

**2.2**

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ", i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
int kt(float n) {
    int i; float s=0;
    if (n == (int) n) {
        for (i=1; i<n; i++) if ((int) n%i==0) s+=i;
        return (s==n);
    }
    else return 0;
}
void SHH(float a[], int n) {
    for (int i=0; i<n; i++) {
        if (kt(a[i])) printf ("%6.2f", a[i]);
    }
}
main () {
    int n;
    do {
        printf ("Nhap n: ");
        scanf ("%d", &n);
        if (n < 10) printf ("Nhap lai: ");
    }
    while (n < 10 );
    float a[n];
    printf ("Nhap mang: \n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Cac so hoan hao trong mang la: ");
    SHH(a,n);

```

}

**ĐỀ 3:****3.1**

```

#include <stdio.h>
#include <conio.h>
int tohop(int k, int n) {
    if (k==0) return 1;
    if (k==n) return 1;
    return tohop( (k-1), (n-1) ) + tohop( k, (n-1) );
}
main ( ) {
    int n, k;
    do {
        printf ("Nhap k, n: ");
        scanf ("%d %d", &k, &n);
        if (k>n) printf ("Nhap k<n. Nhap lai!!!!!!!\n");
        if (k<0||n<0) printf ("Nhap lai!!!!!!!\n");
    }
    while (k>n || k<0 || n<0);
    printf ("To hop chap %d cua %d la: %4d",k,n,tohop(k,n) );
    printf ("\n\n");
    printf("_____Ve tam giac
Pascal_____\n\n");
    for(int i = 0; i <n; i++) {
        for(int j = 0; j <= n-i; j++)
            printf("  ");
        for(int j = 0; j <= i; j++)
            printf(" %5d", tohop(j,i));
        printf("\n");
    }
    return 0;
}

```

**3.2**

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {

```

```

        for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
        printf ("\n");
    }
    int kt(float n) {
        int i; float s=0;
        if (n == (int) n) {
            for (i=1; i<n; i++) if ((int) n%i==0) s+=i;
            return (s==n);
        }
        else return 0;
    }
    void xoa(float a[], int &n) {
        int i,j;
        for (i=0; i<n; i++) {
            do {
                if ( kt(a[i]) ){
                    for (j=i; j<n-1; j++)
                        a[j] = a[j+1];
                    n--;
                }
            } while (kt(a[i]));
            printf ("%6.2f",a[i]);
        }
    }
    main ( ) {
        int n;
        do {
            printf ("Nhap n: ");
            scanf ("%d", &n);
            if (n<10) printf ("Nhap lai n>=10\n");
        }
        while (n<10);
        float a[n];
        printf ("Nhap mang: \n");
        nhap(a,n);
        printf ("Cac phan tu cua mang la: ");
        xuat(a,n);
        printf ("\n");
        printf ("Mang sau khi xoa so hoan hao la: ");
        xoa(a,n);
    }
    getch();

```

```
return 0;
```

```
}
```

## ĐỀ 4:

### 4.1

```
#include <stdio.h>
#include <conio.h>
#include <math.h>
int giaithua(int n) {
    int i, s = 1;
    for (i =1; i <=n ; i++) s*=i;
    return s;
}
main ( ) {
    int n, x, k;
    float s = 1;
    printf ("Nhap n, x: ");
    scanf ("%d%d",&n,&x);
    for (k =1 ; k<= n; k++) s+= ( 1.0*( pow(x,k) ) )/( giaithua(k)
);
    printf ("S = %.2f",s);
}
```

### 4.2

```
#include <stdio.h>
#include <conio.h>
void nhap(int a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%d", &a[i]);
    }
}
void xuat(int a[], int n) {
    for (int i=0; i<n; i++) printf ("%6d", a[i]);
    printf ("\n");
}
int chiahet(int a[], int n) {
    int i;
    int s=0;
    for (i=0; i<n; i++)
        if (a[i]%5==0) s+=a[i];
    return s;
}
main ( ) {
```

```

int n;
do {
    printf ("Nhap n: ");
    scanf ("%d",&n);
    if ( n<10 ) printf ("Nhap lai n>=10 \n");
}
while (n<10);
int a[n], i;
printf ("Nhap mang: \n");
nhap(a,n);
printf ("Cac phan tu cua mang la: ");
xuat(a,n);
printf ("Tong cac so chia het cho 5 la: %d", chiahet(a,n) );
}

```

**ĐỀ 5:****5.1**

```

#include <stdio.h>
#include <conio.h>
int mu(int x, int n) {
    int i, s = 1;
    for ( i = 1; i <= n; i++) s*=x;
    return s;
}
main ( ) {
    int n, x, m;
    float s = 1;
    printf ("Nhap n, x: ");
    scanf ("%d%d",&n,&x);
    for (m = 1; m <= n ; m++) s+= ( 1.0*mu(x, m) )/m;
    printf ("S = %0.2f",s);
return 0;
}

```

**5.2**

```

#include <stdio.h>
#include <conio.h>
void nhap(int a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%d", &a[i]);
    }
}
void xuat(int a[], int n) {

```

```

        for (int i=0; i<n; i++) printf ("%6d", a[i]);
        printf ("\n");
    }
    int Check(long n) {
        long k=2;
        while (k*k<=n && n%k!=0) k++;
    return k*k>n;
    }
    main ( ) {
        int n;
        do {
            printf ("Nhap n>=10: ");
            scanf ("%d",&n);
            if (n < 10) printf ("Nhap sai, Nhap lai: \n");
        }
        while (n < 10);
        int a[n], i;
        printf ("Nhap mang: \n");
        nhap(a,n);
        printf ("Cac phan tu cua mang la: ");
        xuat(a,n);
        printf ("Ket qua xuat ra man hinh: ");
        for (i = 0; i < n; i++)
            if ( Check(a[i]) )
                printf ("%4d",a[i]);
    getch();
    return 0;
}

```

**ĐỀ 6:****6.1**

```

#include <stdio.h>
#include <conio.h>
#include <math.h>
main ( ) {
    float a, b, c, x1, x2, d, x;
    printf ("Nhap a, b, c: ");
    scanf ("%f%f%f",&a,&b,&c);
    if (a==0) {
        if (b!=0) printf ("x = %.2f",-c/b);
        else if (c==0) printf ("PTVSN") ;
        else printf ("PTVN");
    }
}

```



```

else {
    d = b*b - 4*a*c;
    if (d == 0) printf (" x1 = x2 = %.2f",-b/(2*a) );
        else if (d < 0) printf ("PTVN");
            else {
                x1 = ( -b + sqrt(d) )/(2*a);
                x2 = ( -b - sqrt(d) )/(2*a);
                printf (" x1 = %.2f,x2 = %.2f",x1,x2);
            }
        }
return 0;
}

```

## 6.2

```

#include <stdio.h>
#include <conio.h>
void nhap(int a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%d", &a[i]);
    }
}
void xuat(int a[], int n) {
    for (int i=0; i<n; i++) printf ("%6d", a[i]);
    printf ("\n");
}
void xoa(int a[], int n, int k) {
    int i, j;
    for (i=0; i<n; i++) {
        if (i==k) {
            for (j=k; j<n-1; j++) a[j] = a[j+1];
            n--;
        }
        printf ("%6d", a[i]);
    }
}
main ( ) {
    int n, i, k;
    do {
        printf ("Nhap n: ");
        scanf ("%d",&n);
        if (n < 0) printf ("n>0, Nhap lai:\n");
    }
}

```

```

while (n<0);
int a[n];
printf ("Nhap mang: \n");
nhap(a,n);
printf ("Cac phan tu cua mang la: ");
xuat(a,n);
printf ("Nhap k: ");
scanf ("%d",&k);
printf ("Cac phan tu sau khi xoa la: ");
xoa(a,n,k);
return 0;
}

```

**ĐỀ 7:****7.1**

```

#include <stdio.h>
#include <conio.h>
#include <math.h>
main ( ) {
    float r, p, n, a;
    printf ("Nhap tien von: ") ;
    scanf ("%f",&p);
    printf ("Nhap lai suat: ") ;
    scanf ("%f",&r);
    printf ("Nhap thoi han: ") ;
    scanf ("%f",&n);
    for (int i=1; i<=n; i++) {
        a = p * pow(1+r,i);
        printf ("Von tich luy cua nam %d la: %.3f\n",i,a);
    }
    return 0;
}

```

**7.2**

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
}

```

```

        printf ("\n");
    }
    int kt(float a[], int n, float k) {
        int i;
        for ( i = 0; i < n; i++)
            if (a[i] == k) return 1;
        return 0;
    }
    main ( ) {
        int n;
        do {
            printf ("Nhap n: ");
            scanf ("%d",&n);
            if (n < 9) printf ("n>=9, Nhap lai: \n");
        }
        while (n < 9);
        float a[n];
        printf ("Nhap mang: \n");
        nhap(a,n);
        printf ("Cac phan tu trong mang la: ");
        xuat(a,n);
        float k;
        printf ("\n");
        printf ("Nhap k: ");
        scanf ("%f",&k);
        if ( kt(a,n,k) ) printf ("Co trong mang");
        else printf ("Khong co trong mang");
    }
    return 0;
}

```

## ĐỀ 8:

### 8.1

```

#include <stdio.h>
#include <conio.h>
#include <math.h>
main ( ) {
    float a, b, c;
    float x1, x2, x3, x4, d, x, A, B ;
    printf ("Nhap a, b, c: ");
    scanf ("%f%f%f",&a,&b,&c);
    if (a == 0) printf ("khong phai pt bac 4");
    else {
        d = b*b-4*a*c;
    }
}

```

```

        if (d == 0) {
            x = -b/(2*a);
            if (x>0) {
                printf ("Phuong trinh co 2 nghiem phan biet:
");
                x1 = sqrt(x);
                x2 = -sqrt(x);
                printf ("x1 = %.2f , x2 = %.2f",x1,x2);
            }
            else if (x==0) printf ("Phuong trinh co
nghiem kep x1 = x2 = 0");
            else printf ("PTVN");
        }
        else if (d < 0) printf ("PTVN");
        else {
            A = ( -b + sqrt(d)) /(2*a);
            B = ( -b - sqrt(d))/(2*a);
            if (A > 0 && B < 0){
                x1 = sqrt(A);
                x2 = -sqrt(A);
                printf ("Phuong trinh co 2 nghiem
x1 = %.2f , x2 = %.2f",x1,x2);
            }
            else if (B > 0 && A < 0) {
                x3 = sqrt(B);
                x4 = -sqrt(B);
                printf ("Phuong trinh co 2 nghiem
x1 = %.2f,x2 = %.2f",x3,x4);
            }
            else if ( (A==0 && B<0) || (A<0&&B==0)
|| (A==0&&B==0) ) printf ("Phuong trinh co nghiem kep x1 = x2 =0");
            else if (A>0 && B>0) {
                x1 = sqrt(A);
                x2 = -sqrt(A);
                x3 = sqrt(B);
                x4 = -sqrt(B);
                printf ("Phuong trinh co 4 nghiem
phan biet x1 = .2f, x2 = .2f, x3 = .2f, x4 = .2f", x1,x2,x3,x4);
            }
        }
    }
    return 0;

```

}

**8.2**

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void sx(float a[], int n) {
    int i, j; float tg;
    for (i=0; i<n ; i++){
        for (j=i+1; j<n; j++)
            if (a[i] > a[j]){
                tg = a[i];
                a[i] = a[j];
                a[j] =tg;
            }
    }
    for (i=0; i<n; i++) printf ("%6.2f",a[i]);
}
main ( ) {
    int n;
    do {
        printf ("Nhap n: ");
        scanf ("%d",&n);
        if (n<9) printf ("n>=9, Nhap lai: \n");
    }
    while (n<9);
    float a[n];
    printf ("Nhap mang: \n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Cac phan tu sau khi sap xep la: ");
    sx(a,n);
    return 0;
}

```

}

**ĐỀ 9:****9.1**

```
#include <stdio.h>
#include <conio.h>
main ( ) {
    float h, m, s, n, h1, m1, s1;
    printf ("Nhap gio: ");
    scanf ("%f",&h);
    printf ("Nhap phut: ");
    scanf ("%f",&m);
    printf ("Nhap giay: ");
    scanf ("%f",&s);
    printf ("Nhap n: ");
    scanf ("%f",&n);
    h1 = 3600*h + n;
    m1 = 60*m +n;
    s1 = s +n;
    printf ("Gio moi sau n giay: %.3f\n",h1/3600);
    printf ("Phut moi sau n giay: %.3f\n",m1/60);
    printf ("Giay moi sau n giay: %.3f\n",s1);
return 0;
}
```

**9.2**

```
#include <stdio.h>
#include <conio.h>
void nhap(int a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%d",&a[i]);
    }
}
void xuat(int a[], int n) {
    for (int i=0; i<n; i++) printf ("%6d",a[i]);
    printf ("\n");
}
void sx(int a[], int n) {
    int i, j, tg;
    for (i = 0; i<n; i++){
        for (j = i+1; j<n; j++)
            if (a[j] %2 ==0) {
                tg = a[i];
```

```

        a[i] = a[j];
        a[j]= tg;
    }
}
for (i=0; i<n; i++) printf ("%6d",a[i]);
}
main ( ) {
    int n;
    do {
        printf ("Nhap n: ");
        scanf ("%d",&n);
        if (n<9) printf ("n>=9, Nhap lai: \n");
    }
    while (n<9);
    int a[n];
    printf ("Nhap mang: \n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Mang sau khi sap xep: ");
    sx(a,n);
}

```

**ĐỀ 10****10.1**

```

#include <stdio.h>
#include <conio.h>
main ( ) {
    char c;
    int i, j;
    do {
        printf ("Nhap A de chon AND\nNhap O de chon OR\nNhap N de
chon NOT\n");
        scanf ("%c",&c);
        if (c!= 'A' && c!='O' && c!= 'N') printf ("Nhap 1 tron 3
ki tu A O N\n");
    }
    while (c!= 'A' && c!='O' && c!= 'N');
    switch (c) {
        case 'A' :
            printf ("AND\t");
            for (i=0; i<=1; i++) {
                for (j=1; j>=0; j--) {

```

```

        if (i==1) {
            printf ("%d\t%d\t%d", i,j,i&&j); break;}
        printf ("%d\t%d\t%d", i,j,i&j);
        printf ("\n\t");
    }
}
break;
case 'O' :
    printf ("OR\t");
    for (i=0; i<=1; i++) {
        for (j=1; j>=0; j--) {
            if (i==1) {
                printf ("%d\t%d\t%d", i,j,i||j); break;}
            printf ("%d\t%d\t%d", i,j,i||j);
            printf ("\n\t");
        }
    }
    break;
case 'N' :
    printf ("NOT\t");
    for (i=0; i<=1; i++) {
        printf ("%d\t%d",i,!i);
        printf ("\n\t");
    }
    break;
}
}

```

## 10.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("a[%d] = ",i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void sx(float a[], int n) {

```



```

        for (int i=0; i<n; i++) {
            for (int j=i+1; j<n; j++) {
                if (a[i] < a[j]) {
                    float tg = a[i];
                    a[i] = a[j];
                    a[j] = tg;
                }
            }
        }
        for (int i =0; i<n; i++) printf ("%6.2f", a[i]);
    }
main ( ) {
    int n, i;
    do {
        printf ("Nhap n: ");
        scanf ("%d", &n);
        if (n<9) printf ("Nhap lai n>=9\n");
    }
    while (n<9);
    float a[n];
    printf ("Nhap cac phan tu cua mang: \n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Cac phan tu sau khi sap xep: ");
    sx(a,n);
    getch( );
    return 0;
}

```

**ĐỀ 11:****11.1**

```

#include <stdio.h>
#include <conio.h>
#include <math.h>
main ( ) {
    int n, i;
    float pi;
    printf ("Nhap n: ");
    scanf ("%d",&n);
    pi = 0;
    for( i=0; i<=n; i++) pi = pi+4.0*( ( pow(-1,i) )/ (2*i +1) );
    printf ("pi = %.2f",pi);
}

```

```
return 0;
}
```

## 11.2

```
#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("a[%d] = ",i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
int chiahet(float n) {
    if (n == (int) n) {
        if ((int) n%5 ==0) return 1;
        return 0;
    }
    else return 0;
}
void chia5(float a[], int n) {
    for (int i=0; i<n;i++) if ( chiahet(a[i]) ) printf
("%6.2f",a[i]);
}
main ( ) {
    int n;
    do {
        printf ("Nhap n: ");
        scanf ("%d",&n);
        if ( n<15 ) printf ("n>=15. Nhap lai: \n");
    }
    while (n<15);
    float a[n];
    printf ("Nhap mang: \n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Cac phan tu chia het cho 5 la: " ) ;
    chia5(a,n);
    return 0;
}
```

}

**ĐỀ 12:****12.1**

```

#include <stdio.h>
#include <conio.h>
#include <math.h>
int gt(int n) {
    if (n == 1||n == 0) return 1;
    return n*gt(n-1);
}
main ( ) {
    int n=0;
    float x, k, sin=0;
    printf ("Nhap x: ");
    scanf ("%f", &x);
    k=x;
    while ( fabs( pow(k, 2*n+1) / gt(2*n+1) ) >= pow(10,-6) ) {
        sin+= 1.0*( pow(-1, n)*pow(k, 2*n+1) )/gt(2*n+1);
        n++;
    }
    printf ("Sin(%0.2f) = %0.5f", x, sin);
    getch( );
    return 0;
}

```

**12.2**

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n, char ch) {
    for (int i=0; i<n; i++) {
        printf ("%c[%d] = ",ch,i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void NOIMANG(float a[], float b[], int n, int m) {
    int i, j=0;
    for (i=m; i<n+m; i++) {
        b[i] = a[j];
        j++;
    }
}

```

```

    }
    printf ("Mang sau khi noi la: ");
    for (i=0; i<n+m; i++) printf ("%6.2f",b[i]);
}
main ( ) {
    int n, m;
    printf ("Nhap so phan tu cua mang A: ");
    scanf ("%d",&n);
    printf ("Nhap so phan tu cua mang B: ");
    scanf ("%d", &m);
    float a[n], b[m];
    printf ("Nhap mang A:\n");
    nhap(a,n,'A');
    printf ("Nhap mang B:\n");
    nhap(b,m,'B');
    printf ("Cac phan tu cua mang A la: ");
    xuat(a,n);
    printf ("Cac phan tu cua mang B la: ");
    xuat(b,m);
    NOIMANG(a,b,n,m);
    getch( );
    return 0;
}

```

## ĐỀ 13

### 13.1

```

#include <stdio.h>
#include <conio.h>
int SODOIXUNG(int s1){
    int s2 = 0; // so nguoc cua s1
    int tm = s1;
    while (tm > 0)
    {
        s2 = s2*10 + tm%10;
        tm /= 10;
    }
    return (s2 == s1);
}
main ( ) {
    int a;
    printf ("Nhap a: ");
    scanf ("%d", &a);
    if ( SODOIXUNG(a) ) printf ("La so doi xung");
}

```

```

        else printf ("Khong phai la so doi xung");
    getch( );
    return 0;
}

```

### 13.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void xoa(float a[], int &n) {
    int i;
    for (i=0; i<n-1; i++){
        a[i] = a[i+1];
    }
    n--;
    for (i=0; i<n; i++) printf ("%6.2f",a[i]);
}
main ( ) {
    int n;
    do {
        printf ("Nhap n: ");
        scanf ("%d", &n);
        if (n<15) printf ("Nhap lai n>=15\n");
    }
    while (n<15);
    float a[n];
    printf ("Nhap mang:\n");
    nhap(a,n);
    printf("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Cac phan tu sau khi xoa la: ");
    xoa(a,n);
    getch( );
    return 0;
}

```

}

**ĐỀ 14****14.1**

```
#include <stdio.h>
#include <conio.h>
main ( ) {
    int n, s=0;
    do {
        printf ("Nhap n: ");
        scanf ("%d", &n);
        s+=n;
    }
    while (n!=0);
    printf ("Tong cac so la: %2d",s);
    getch ( );
    return 0;
}
```

**14.2**

```
#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void xoa(float a[], int &n) {
    int i;
    for (i=n-1; i>0; i--){
        a[i] = a[i+1];
    }
    n--;
    for (i=0; i<n; i++) printf ("%6.2f",a[i]);
}
main ( ) {
    int n;
    do {
        printf ("Nhap n: ");
```

```

        scanf ("%d",&n);
        if (n<15) printf ("n>=15. Nhap lai: \n");
    }
    while (n<15);
    float a[n];
    printf ("Nhap mang:\n");
    nhap(a,n);
    printf("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Cac phan tu cua mang sau khi xoa phan tu cuoi cung:
");
        xoa(a,n);
return 0;
}

```

## ĐỀ 15

### 15.1

```

#include <stdio.h>
#include <conio.h>
main ( ) {
    int i, j;
    printf ("_____Bang cuu
chuong_____)\n\n");
    for (i = 1; i<=10; i++){
        for(j=2; j<=10; j++) {
            printf ("%d x%3d =%2d  ",j,i,i*j);
        }
        printf ("\n");
    }

return 0;
}

```

### 15.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f", &a[i]);
    }
}

void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
}

```

```

        printf ("\n");
    }
    int kt(float n) {
        if (n<2) return 0;
        if (n == (int) n ){
            for ( int i=2; i*i<=n; i++ )
                if ((int) n%i == 0) return 0;
            return 1;
        }
        else return 0;
    }
    void SNT(float a[], int n) {
        float s=0;
        for (int i=0; i<n; i++) if (kt(a[i]) )
            s+=a[i];
        printf ("%6.2f",s);
    }
    main ( ) {
        int n;
        do {
            printf ("Nhap n: ");
            scanf ("%d",&n);
            if (n<15) printf ("n>=15, Nhap lai\n");
        }
        while (n<15);
        float a[n];
        printf ("Nhap mang:\n");
        nhap(a,n);
        printf("Cac phan tu cua mang la: ");
        xuat(a,n);
        printf ("Tong cac so nguyen to trong mang la: ");
        SNT(a,n);
    }
    return 0;
}

```

## ĐỀ 16

### 16.1

```

#include <stdio.h>
#include <conio.h>
int SODOIXUNG(int n) {
    int tm = n , m = 0; //so nguoc cua n
    while (tm > 0) {
        m = m*10+ tm%10;
    }
}

```



```

        tm = tm/10;
    }
    return (m == n);
}
main ( ) {
    int n;
    printf ("Nhap N: ");
    scanf ("%d", &n);
    for (int i=0; i<n; i++) if ( SODOIXUNG(i) ) printf ("%4d", i);
    getch( );
    return 0;
}

```

## 16.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ", i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
int kt(float n) {
    int i;
    if (n<2) return 0;
    if (n == (int) n) {
        for (i=2; i*i<=n; i++) if ((int) n%i==0) return 0;
        return 1;
    }
    else return 0;
}
void SNT(float a[], int n) {
    for (int i=0; i<n; i++) if ( kt(a[i]) ) printf ("%6.2f", a[i]);
}
main ( ) {
    int n;
    do {
        printf ("Nhap n: ");
        scanf ("%d", &n);
    } while (n<2);
}

```

```

        if (n<0) printf ("Nhap lai :\n");
    }
    while (n<0);
    float a[n];
    printf ("Nhap mang: \n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Cac so nguyen to trong mang la: ");
    SNT(a,n);
    getch( );
    return 0;
}

```

## ĐỀ 17

### 17.1

```

#include <stdio.h>
int day_fibonacci(int n) {
    if( n <= 2) return 1;
    return day_fibonacci(n-1) + day_fibonacci(n-2);
}
int main() {
    int n;
    printf ("Nhap n: ");
    scanf ("%d", &n);
    for (int i = 1; i <= n; i++)
        printf("%4d", day_fibonacci(i));
    return 0;
}

```

### 17.2

```

#include <stdio.h>
#include <conio.h>
#include <math.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}

```

```

int kt(float n) {
    if (n == (int) n) {
        if ( ( sqrt(n) * sqrt(n) ) == n ) return 1;
        return 0;
    }
    else return 0;
}

void SCP(float a[], int n){
    for (int i=0; i<n; i++) if (kt(a[i])) printf ("%6.2f",a[i]);
}

main ( ) {
    int n;
    do {
        printf ("Nhap n: ");
        scanf ("%d", &n);
        if (n<=0) printf ("n>0. Nhap lai: \n");
    }
    while ( n<=0);
    float a[n];
    printf ("Nhap mang:\n");
    nhap(a,n);
    printf("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Cac so chinh phuong trong mang la: ");
    SCP(a,n);
return 0;
}

```

**ĐỀ 18****18.1**

```

#include <stdio.h>
#include <conio.h>
main ( ) {
    int n, m=0;//m la so dao cua n
    printf ("Nhap n: ");
    scanf ("%d", &n);
    while (n>0) {
        m = m*10 +n%10;
        n = n/10;
    }
    printf ("So dao cua n la: %d",m);
getch( );
return 0;
}

```

## 18.2

```

}

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
int kt(float n){
    float s = 0; int i;
    if (n == (int) n) {
        for (i = 1; i < n ; i++)
            if ((int) n%i == 0) s+=i;
        return (s == n);
    }
    else return 0;
}
void SHH(float a[], int n) {
    for (int i=0; i<n; i++) if (kt(a[i])) printf ("%6.2f",a[i]);
}
main (){
    int n;
    do {
        printf ("Nhap n: ");
        scanf ("%d", &n);
        if (n < 0) printf ("Nhap lai: ");
    }
    while (n < 0 );
    float a[n];
    printf ("Nhap mang:\n");
    nhap(a,n);
    printf("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("cac so hoan hao trong mang la: ");
    SHH(a,n);
}

```

**ĐỀ 19****19.1**

```

#include <stdio.h>
#include <conio.h>
int gt(int n){
    if (n==0||n==1) return 1;
    return n*gt(n-2);
}
main ( ) {
    int n, s;
    printf ("Nhap n: ");
    scanf ("%d", &n);
    if (n==0) printf ("Khong co giai thua kep");
    else printf ("%d!! = %d",n,gt(n));
    getch( );
    return 0;
}

```

**19.2**

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void MAX(float a[], int n) {
    float max=0;
    for (int i=0; i<n; i++){
        if (a[i] == (int) a[i] && (int) a[i]%2!=0)
            if (a[i]>max) max = a[i];
    }
    if (max==0) printf ("Khong co so nguyen duong le trong mang");
    else printf ("So nguyen duong le lon nhat la: %.2f", max);
}
main ( ) {
    int n;
    do {

```

```

        printf ("Nhap n: ");
        scanf ("%d", &n);
        if (n<0) printf ("Nhap lai n>=0\n");
    }
    while (n<0);
    float a[n];
    printf ("Nhap mang: \n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    MAX(a,n);
    getch( );
    return 0;
}

```

**ĐỀ 20****20.1**

```

#include <stdio.h>
#include <math.h>
main ( ) {
    float a,b,c,x1,x2,D;
    printf ("Nhap cac he so a,b,c: ");
    scanf ("%f %f %f", &a, &b, &c);
    if (a==0) {
        if (b!=0) printf ("PT co 1 nghiem X= %.2f", -c/b);
        else if (c==0) printf ("PT co vo so nghiem");
        else printf ("PT vo nghiem");
    }
    else {
        D=b*b-4*a*c;
        if (D<0) printf ("PT vo nghiem");
        if (D==0) printf ("PT co nghiem kep X1=X2= %.2f", -
b/(2*a));
        if (D>0) {
            x1= (-b - sqrt(D) )/(2*a);
            x2= (-b + sqrt(D) )/(2*a);
            printf ("PT co 2 nghiem phan biet:\nX1= %.2f\nX2=
%.2f", x1, x2);
        }
    }
}

```

**20.2**

```

#include <stdio.h>

```

```

#include <conio.h>
#include <math.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
int kt(float n) {
    if (n == (int) n) {
        if ( sqrt(n) * sqrt(n) == n) return 1;
        return 0;
    }
    else return 0;
}
void SCP(float a[], int n) {
    float s=0;
    for (int i=0; i<n ; i++)
        if ( kt(a[i]) ) {
            s+=a[i];
            printf ("%6.2f",a[i]);
        }
    printf ("\nTong cac so chinh phuong la: %.2f",s);
}
main ( ) {
    int n, i, s;
    printf ("Nhap n: ");
    scanf ("%d", &n);
    float a[n];
    printf ("Nhap mang: \n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Cac so chinh phuong cua mang la: ");
    SCP(a,n);
    return 0;
}

```

## 21.1

```
#include <stdio.h>
#include <conio.h>
#include <math.h>
main ( ) {
    float a, b, c;
    do {
        printf ("Nhap a, b, c: ");
        scanf ("%f %f %f", &a, &b, &c);
        if (a<0 || b<0 || c<0) printf ("a,b,c>0. Nhap lai: \n");
    }
    while (a<0 || b<0 || c<0);
    if (a+b>c && b+c>a && a+c>b) printf ("Day la 3 canh cua tam
giac ");
    else printf ("Day khong phai la 3 canh cua tam giac ");
    return 0;
}
```

## 21.2

```
#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ", i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void daomang(float a[], int n) {
    int i; float tg;
    for ( i=0; i<n/2; i++) {
        tg=a[i];
        a[i] = a[n-1-i];
        a[n-1-i] = tg;
    }
    for (i=0; i<n; i++) printf ("%6.2f", a[i]);
}
main ( ) {
    int n;
```



```

do {
    printf ("Nhap N: ");
    scanf ("%d", &n);
    if (n<=0) printf ("N>0. Nhap lai: \n");
}
while (n<=0);
float a[n];
printf ("Nhap mang: \n");
nhap(a,n);
printf ("Cac phan tu cua mang la: ");
xuat(a,n);
printf ("Cac phan tu sau khi dao mang la: ");
daomang(a,n);
return 0;
}

```

## ĐỀ 22

### 22.1

```

#include <stdio.h>
#include <conio.h>
main ( ) {
    int n, k, s=0;
    printf ("Nhap N: ");
    scanf ("%d",&n);
    while (n>0){
        k=n%10;
        s=s+k;
        n/=10;
    }
    printf ("Tong cac chu so cua N la: %d",s);
    getch( );
    return 0;
}

```

### 22.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n, char ch) {
    for (int i=0; i<n; i++) {
        printf ("%c[%d] = ",ch,i);
        scanf ("%f",&a[i]);
    }
}
void xuat(float a[], int n) {

```

```

        for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
        printf ("\n");
    }
void CONGMANG(float a[], float b[], float c[], int n) {
    for (int i=0; i<n; i++) {
        c[i] = a[i]+b[i];
        printf ("%6.2f",c[i]);
    }
}
main ( ) {
    int n;
    do {
        printf ("Nhap N: ");
        scanf ("%d",&n);
        if (n<0) printf ("Nhap lai N: \n");
    }
    while (n<0);
    float a[n], b[n], c[n];
    printf ("Nhap mang A: \n");
    nhap(a,n,'A');
    printf ("Nhap mang B: \n");
    nhap(b,n,'B');
    printf ("Cac phan tu cua A la: ");
    xuat(a,n);
    printf ("Cac phan tu cua B la: ");
    xuat(b,n);
    printf ("Cac phan tu cua C la: ");
    CONGMANG(a,b,c,n);
    getch( );
    return 0;
}

```

## ĐỀ 23

### 23.1

```

#include <stdio.h>
#include <conio.h>
#include <math.h>
main ( ) {
    float a,b,c;
    do {
        printf ("Nhap a, b, c: ");
        scanf ("%f%f%f", &a, &b, &c);
        if (a<=0||b<=0||c<=0) printf ("Nhap lai\n");
    }
}

```

```

    }
    while (a<=0||b<=0||c<=0);
    if (a+b>c && a+c>b && b+c>a) {
        printf ("DAY LA 3 CANH CUA TAM GIAC ");
        if (a==b && b==c) printf ("DEU");
        else if (a==b || b==c || a==c) {
            if ( a*a + b*b == c*c || b*b + c*c == a*a || a*a +
c*c == b*b ) printf ("VUONG CAN");
            else printf ("CAN");
        }
        else if (a*a + b*b == c*c || b*b + c*c == a*a || a*a + c*c
== b*b) printf ("VUONG");
        else printf ("THUONG");
    }
    else printf ("DAY KHONG PHAI LA 3 CANH CUA TAM GIAC");
    getch( );
    return 0;
}

```

## 23.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f",&a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void MAX(float a[], int n) {
    int i; float max=0;
    for (i=0; i<n; i++) if (a[i] > max ) max=a[i];
    printf ("Gia tri lon nhat cua mang A la: %.2f", max);
}
main ( ) {
    int n;
    do {
        printf ("Nhap N: ");
        scanf ("%d", &n);
        if (n<0) printf ("Nhap lai N\n");
    }
}

```

```

    }
    while (n<0);
    float a[n];
    printf ("Nhap mang A: \n");
    nhap(a,n);
    printf ("Cac phan tu cua A la: ");
    xuat(a,n);
    MAX(a,n);
    getch( );
    return 0;
}

```

## ĐỀ 24

### 24.1

```

#include <stdio.h>
#include <conio.h>
main ( ) {
    float a, b, c, max, min;
    printf ("Nhap a, b, c: ");
    scanf ("%f%f%f", &a, &b, &c);
    max = a;
    if (b > max) {
        max = b;
        min = a;
    }
    else min = b;
    if (c == max||c == min||max == min) printf ("Khong co so trung gian");
    else if (c > max) printf ("So trung gian la: %0.2f",max);
    else if (c < min) printf ("So trung gian la: %0.2f", min);
    else if (c >= min || c <= max) printf ("So trung gian la: %0.2f",c);
    getch ( );
    return 0;
}

```

### 24.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f",&a[i]);
    }
}

```

```

}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void MIN(float a[], int n) {
    int k, i; float min=a[0];
    for (i=0; i<n; i++)
        if (a[i] < min ){
            min = a[i];
            k = i;
        }
    printf ("Gia tri nho nhat la: %.2f",min);
    printf ("\n");
    printf ("Vi tri cua gia tri nho nhat la: A[%d]",k);
}
main ( ) {
    int n;
    do {
        printf ("Nhap N: ");
        scanf ("%d", &n);
        if (n<0) printf ("Nhap lai N: ");
    }
    while (n<0);
    float a[n];
    printf ("Nhap mang: \n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    MIN(a,n);
    getch( );
    return 0;
}

```

## ĐỀ 25

### 25.1

```

#include <stdio.h>
#include <conio.h>
main ( ) {
    int n;
    do {
        printf ("Nhap ki tu: \n1 de dua ra Mua Xuan\n2 de dua ra
Mua Ha\n3 de dua ra Mua Thu\n4 de dua ra Mua Dong\n");
    }
}

```

```

        scanf ("%d",&n);
        if (n<1||n>4) printf ("1<=N<=4. Nhap lai: \n");
    }
    while (n<1|| n>4);
    switch (n) {
        case 1: printf ("Mua Xuan");break;
        case 2: printf ("Mua Ha"); break;
        case 3: printf ("Mua Thu"); break;
        case 4: printf ("Mua Dong"); break;
    }
    return 0;
}

```

## 25.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f",&a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void xoa(float a[], int &n) {
    int i, j;
    for (i=0; i<n; i++) {
        if (a[i] < 0){
            for (j=i; j<n-1; j++) a[j] = a[j+1];
            break;
        }
    }
    n--;
    for (i=0; i<n; i++) printf ("%6.2f", a[i]);
}
main ( ) {
    int n;
    do {
        printf ("Nhap N: ");
        scanf ("%d",&n);
        if (n<=0) printf ("N>0. Nhap lai: \n");
    }
}

```

```

    }
    while (n<=0);
    float a[n];
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("\n");
    printf ("Mang sau khi xoa: ");
    xoa(a,n);
return 0;
}

```

**ĐỀ 26****26.1**

```

#include <stdio.h>
#include <conio.h>
main ( ) {
    char c;
    do {
        printf ("Nhap ki tu: \n X de chon mua xuan\n H de chon mua
ha\n T de chon mua thu\n D de chon mua dong\n");
        scanf ("%c", &c);
        if (c!= 'X' && c!= 'H' && c!= 'T' && c!= 'D') printf ("Chi
nhap 1 trong 4 ki tu X H T D\n");
    }
    while (c!= 'X' && c!= 'H' && c!= 'T' && c!= 'D');
    switch (c) {
        case 'X' : printf ("MUA XUAN");
            break;
        case 'H' : printf ("MUA HA");
            break;
        case 'T' : printf ("MUA THU");
            break;
        case 'D' : printf ("MUA DONG");
            break;
    }
return 0;
}

```

## 26.2

```
#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f",&a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
int kt(float n) {
    int i;
    if (n<2) return 0;
    if (n == (int) n) {
        for (i=2; i*i<=n; i++) if ((int) n%i==0) return 0;
        return 1;
    }
    else return 0;
}
void SNT(float a[], int n) {
    int i, dem=0; float nt;
    for (i=0; i<n; i++) {
        if ( kt(a[i]) ) {
            nt=a[i];
            dem++;
        }
    }
    if (dem == 0) printf ("Khong co so nguyen to trong mang");
    else printf ("So nguyen to trong mang la: %.2f", nt);
}
main ( ) {
    int n;
    printf ("Nhap n: ");
    scanf ("%d", &n);
    float a[n];
    printf ("Nhap mang: \n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
}
```



```

    printf("\n");
    SNT(a,n);
getch( );
return 0;
}

```

## ĐỀ 27

### 27.1

```

#include <stdio.h>
#include <conio.h>
int gt(int n) {
    if (n==0||n==1) return 1;
    return gt(n-1)*n;
}
main ( ) {
    int n;
    printf ("Nhap n: ");
    scanf ("%d",&n);
    printf ("%d giai thua bang %d",n,gt(n));
getch( );
return 0;
}

```

### 27.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f",&a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
int kt(float n) {
    if (n == (int) n) {
        if ((int) n%5==0) return 1;
        return 0;
    }
    else return 0;
}
void chia5(float a[], int n) {

```

```

    int i; float s=0;
    for (i=0; i<n; i++) if (kt(a[i])) {
        printf ("%6.2f",a[i]);
        s+=a[i];
    }
    printf ("\nTong cac so chia het cho 5 la: %.2f",s);
}
main ( ) {
    int n;
    do {
        printf ("Nhap n: ");
        scanf ("%d",&n);
        if (n<0) printf ("Nhap lai!!!!\n");
    }
    while (n<0);
    float a[n];
    printf ("Nhap mang:\n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Cac so chia het cho 5 la: ");
    chia5(a,n);
    getch( );
    return 0;
}

```

**ĐỀ 28****28.1**

```

#include <stdio.h>
#include <conio.h>
#include <math.h>
float TINHTONG(int n, float x) {
    int i;float s=1;
    for (i=1; i<=n; i++) s+= ( pow(x,i) ) /i ;
    return s;
}
main ( ) {
    int n; float x;
    printf ("Nhap n: ");
    scanf ("%d",&n);
    printf ("Nhap x: ");
    scanf ("%f",&x);
    printf ("Tong S = %0.4f",TINHTONG(n,x));
}

```

```

getch( );
return 0;
}

```

## 28.2

```

#include <stdio.h>
#include <conio.h>
void in(float a[]);
main ( ) {
    float a[]={0,4,6,8};
    in(a);
    getch( );
    return 0;
}
void in(float a[]) {
    int dem=0;
    for (int i=0; i<4; i++) {
        for (int j=0; j<4; j++) {
            for (int k=0; k<4; k++) {
                for (int l=0; l<4; l++) {
                    if (j!=i && (k!=j && k!=i) && (l!=k && l!=j
&&
                    l!=i)&&a[i]!=0) {
                        printf
("%0.1f\n",a[i]*100+a[j]*10+a[k]+a[l]/10);
                        dem++;
                    }
                }
            }
        }
    }
    printf ("Co %d cach",dem);
}

```

## ĐỀ 29

### 29.1

```

#include <stdio.h>
#include <conio.h>
void in(float a[]);
main ( ) {
    float a[]={0,1,2,3};
    in(a);
    getch( );
    return 0;
}

```

```

void in(float a[]) {
    int i,j,k,l, dem=0;
    for (i=0; i<4; i++) {
        for (j=0; j<4; j++) {
            for (k=0; k<4; k++) {
                for (l=0; l<4; l++) {
                    if(j!=i && (k!=j && k!=i) && (l!=k && l!=j
&& l!=i) && a[i]!=0 ) {
                        printf
("%0.2f\n",a[i]*10+a[j]+a[k]/10+a[l]/100);
                        dem++;
                    }
                }
            }
        }
    }
    printf ("Co %d cach",dem);
}

```

## 29.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f",&a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
int kt(float n) {
    int i;
    if (n<2) return 0;
    if (n == (int) n) {
        for (i=2; i*i<=n; i++) if ((int) n%i==0) return 0;
        return 1;
    }
    else return 0;
}
void SNT(float a[], int n) {
    int i, dem=0; float nt;

```

```

        for (i=0; i<n; i++) {
            if ( kt(a[i]) ) {
                nt=a[i];
                dem++;
            }
        }
        if (dem == 0) printf ("Khong co so nguyen to trong mang");
        else printf ("So nguyen to trong mang la: %.2f", nt);
    }
main ( ) {
    int n;
    printf ("Nhap n: ");
    scanf ("%d", &n);
    float a[n];
    printf ("Nhap mang: \n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf("\n");
    SNT(a,n);
    getch( );
    return 0;
}

```

**ĐỀ 30****30.1**

```

#include <stdio.h>
#include <conio.h>
void sx(float a[]);
main ( ) {
    float a[]={2,4,6,8};
    sx(a);
    getch( );
    return 0;
}
void sx(float a[]) {
    int i,j,k,l,dem=0;
    for (i=0; i<4; i++) {
        for (j=0; j<4; j++) {
            for (k=0; k<4; k++) {
                for (l=0; l<4; l++) {
                    if (j!=i && (k!=j && k!=i) && (l!=k && l!=j
&& l!=i) ) {

```

## 30.2

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```

    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Cac phan tu sau khi da sap xep la: ");
    sx(a,n);
getch( );
return 0;
}

```

## ĐỀ 31

### 31.1

```

#include <stdio.h>
#include <conio.h>
int lietke();
main ( ) {
    printf ("SO NHO NHAT CO 3 CHU SO VA CHIA CHO 2,3,4,5,6 DEU DU
1 LA: %d",lietke());
    getch( );
    return 0;
}
int lietke() {
    int n;
    printf ("CAC SO CO 3 CHU SO VA CHIA HET CHO 2,3,4,5,6 DEU DU 1
LA: \n");
    for (int i=101; i<=999; i++) {
        if (i%2==1 && i%3==1 && i%4==1 && i%5==1 && i%6==1){
            n=i;
            break;
        }
    }
    for (int i=101; i<=999; i++) {
        if (i%2==1 && i%3==1 && i%4==1 && i%5==1 && i%6==1) printf
("%d\n",i);
    }
    return n;
}

```

### 31.2

```

#include <stdio.h>
#include <conio.h>
int demsolvingso2(int n);
int demsolvingso5(int n);
main ( ) {
    int n, i, dem2=0, dem5=0, dem25=0;

```

```

    printf ("Nhap so luong cac so can tinh: ");
    scanf ("%d",&n);
    int a[n];
    for (i=0; i<n; i++) scanf ("%d",&a[i]);          //Nhap cac so
can tinh
    for (i=0; i<n; i++) {
        if (a[i] == 0) {
            printf ("So chu so 0 tan cung cua tich cac so tren
la: 1");
            return 0;
        }
        if (a[i]%2==0) dem2 = dem2 + demsoluongso2(a[i]);
        if (a[i]%5==0) dem5 = dem5 + demsoluongso5(a[i]);
        if (dem2 <= dem5) dem25=dem2;
        else dem25=dem5;
    }
    printf ("So chu so 0 tan cung cua tich cac so tren la:
%d",dem25);
    getch( );
    return 0;
}
int demsoluongso2(int n) {
    int dem=0;
    while (n%2==0) {
        n/=2;
        dem++;
    }
    return dem;
}
int demsoluongso5(int n) {
    int dem=0;
    while(n%5==0) {
        n/=5;
        dem++;
    }
    return dem;
}

```

**ĐỀ 32****32.1**

```

#include <stdio.h>
#include <conio.h>
int gt(int n) {

```



```

    int i,s=1;
    if (n%2==0)
        for (i=2; i<=n; i+=2) s*=i;
    if (n%2==1)
        for (i=1; i<=n; i+=2) s*=i;
    return s;
}
main ( ) {
    int n;
    printf ("Nhap n: ");
    scanf ("%d",&n);
    if (n==0) printf ("Khong co giai thua kep");
    else printf ("%d!! = %d",n,gt(n));
    getch( );
    return 0;
}

```

### 32.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n){
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f",&a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f",a[i]);
    printf ("\n");
}
void ND(float a[], int n){
    int i; float max=0;
    for (i=0; i<n; i++) {
        if (a[i] == (int) a[i] && (int) a[i]%2!=0 && a[i] >0) {
            if( a[i] > max) max =a[i];
        }
    }
    if (max == 0) printf ("Khong co so nguyen duong le trong mang");
    else printf ("So nguyen duong le lon nhat trong mang la: %.2f",max);
}
main ( ) {

```

```

    int n;
    printf ("Nhap n: ");
    scanf ("%d",&n);
    float a[n];
    printf ("Nhap mang:\n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    ND(a,n);
getch( );
return 0;
}

```

**ĐỀ 33****33.1**

```

#include <stdio.h>
#include <conio.h>
int gt(int n){
    int i,s=1;
    if (n%2==0) {
        i=2;
        while(i<=n){
            s*=i;
            i+=2;
        }
    }
    if (n%2!=0) {
        i=1;
        while(i<=n){
            s*=i;
            i+=2;
        }
    }
    return s;
}
main ( ) {
    int n;
    printf ("Nhap n: ");
    scanf ("%d",&n);
    if (n==0) printf ("Khong co giai thua kep");
    else printf ("%d!! = %d",n,gt(n));
getch( );
return 0;
}

```

}

**33.2**

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n){
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f",&a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f",a[i]);
    printf ("\n");
}
void dao(float a[], int n) {
    int i;
    for (i=0; i<n/2; i++) {
        float tg=a[i];
        a[i] = a[n-i-1];
        a[n-i-1] = tg;
    }
    for (i=0; i<n; i++) printf ("%6.2f",a[i]);
}
main ( ) {
    int n;
    printf ("Nhap n: ");
    scanf ("%d",&n);
    float a[n];
    printf ("Nhap mang:\n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Cac phan tu sau khi dao la: ");
    dao(a,n);
    getch( );
    return 0;
}

```

**ĐỀ 34****34.1**

```

#include <stdio.h>
#include <conio.h>
int gt(int n){

```

```

    int i,s=1;
    if (n%2==0) {
        if (n==0) return 1;
        i=2;
        do {
            s*=i;
            i+=2;
        }
        while(i<=n);
    }
    if (n%2!=0) {
        i=1;
        do {
            s*=i;
            i+=2;
        }
        while(i<=n);
    }
    return s;
}
main ( ) {
    int n;
    printf ("Nhap n: ");
    scanf ("%d",&n);
    if (n==0) printf ("Khong co giai thua kep");
    else printf ("%d!! = %d",n,gt(n));
    getch( );
    return 0;
}

```

### 34.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n){
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f",&a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f",a[i]);
    printf ("\n");
}

```

```

void sx(float a[], int n) {
    int i,j; float tg;
    for (i=0; i<n; i++) {
        for (j=i+1; j<n; j++) {
            if (a[i] < a[j]) {
                tg=a[j];
                a[j]=a[i];
                a[i]=tg;
            }
        }
        printf ("%6.2f",a[i]);
    }
}

main ( ) {
    int n;
    printf ("Nhap n: ");
    scanf ("%d",&n);
    float a[n];
    printf ("Nhap mang: \n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Cac phan tu sau khi sap xep la: ");
    sx(a,n);
    getch( );
    return 0;
}

```

**ĐỀ 35****35.1**

```

#include <stdio.h>
#include <conio.h>
int gt(int n) {
    if (n==0||n==1) return 1;
    return n*gt(n-2);
}

main ( ) {
    int n;
    printf ("Nhap n: ");
    scanf ("%d",&n);
    if (n==0) printf ("Khong co giai thua kep");
    else printf ("%d!! = %d",n,gt(n));
    getch( );
}

```

```
return 0;
}
```

### 35.2

```
#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f",&a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
int kt(float n) {
    int i;
    if (n<2) return 0;
    if (n == (int) n) {
        for (i=2; i*i<=n; i++) if ((int) n%i==0) return 0;
        return 1;
    }
    else return 0;
}
void SNT(float a[], int n) {
    int i, dem=0; float nt;
    for (i=0; i<n; i++) {
        if ( kt(a[i]) ) {
            nt=a[i];
            dem++;
        }
    }
    if (dem == 0) printf ("Khong co so nguyen to trong mang");
    else printf ("So nguyen to trong mang la: %.2f", nt);
}
main ( ) {
    int n;
    printf ("Nhap n: ");
    scanf ("%d", &n);
    float a[n];
    printf ("Nhap mang: \n");
    nhap(a,n);
```

```

    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf("\n");
    SNT(a,n);
getch( );
return 0;
}

```

## ĐỀ 36

### 36.1

```

#include <stdio.h>
#include <conio.h>
void doicoso(int n, int coso){
    if (n>=coso) doicoso(n/coso,coso);
    printf
("%c", (n%coso) ["0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ"]);
}
main ( ) {
    int n, coso;
    printf ("Nhap n: ");
    scanf ("%d",&n);
    printf ("Nhap co so: ");
    scanf ("%d",&coso);
    printf ("%d sang co so %d = ",n,coso);
    doicoso(n,coso);
getch( );
return 0;
}

```

### 36.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f",&a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
int kt(float n) {
    int i;

```

```

    if (n<2) return 0;
    if (n == (int) n) {
        for (i=2; i*i<=n; i++) if ((int) n%i==0) return 0;
        return 1;
    }
    else return 0;
}

void SNT(float a[], int n) {
    int i, dem=0; float nt;
    for (i=0; i<n; i++) {
        if ( kt(a[i]) ) {
            nt=a[i];
            dem++;
        }
    }
    if (dem == 0) printf ("Khong co so nguyen to trong mang");
    else printf ("So nguyen to trong mang la: %.2f", nt);
}

main ( ) {
    int n;
    printf ("Nhap n: ");
    scanf ("%d", &n);
    float a[n];
    printf ("Nhap mang: \n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf("\n");
    SNT(a,n);
getch( );
return 0;
}

```

**ĐỀ 37****37.1**

```

#include <stdio.h>
#include <conio.h>
int gt(int n) {
    if (n==0||n==1) return 1;
    return n*gt(n-2);
}

main ( ) {
    int n;

```



```

    printf ("Nhap n: ");
    scanf ("%d",&n);
    if (n==0) printf ("Khong co giai thua kep");
    else printf ("%d!! = %d",n,gt(n));
    getch( );
    return 0;
}

```

### 37.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n, char ch) {
    for (int i=0; i<n; i++) {
        printf ("%c[%d] = ",ch,i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void NOIMANG(float a[], float b[], int n, int m) {
    int i, j=0;
    for (i=m; i<n+m; i++) {
        b[i] = a[j];
        j++;
    }
    for (i=0; i<n+m; i++) {
        for (j=i+1; j<n+m; j++) {
            if (b[i] > b[j]) {
                float tg=b[j];
                b[j]=b[i];
                b[i]=tg;
            }
        }
        printf ("%6.2f",b[i]);
    }
}
main ( ) {
    int n, m; float a[100], b[100];
    printf ("Nhap so phan tu cua A: ");
    scanf ("%d",&n);
    printf ("Nhap mang A:\n");
}

```

```

    nhap(a,n,'A');
    printf ("Nhap so phan tu cua B: ");
    scanf ("%d",&m);
    printf ("Nhap mang B:\n");
    nhap(b,m,'B');
    printf ("Cac phan tu cua A la: ");
    xuat(a,n);
    printf ("Cac phan tu cua B la: ");
    xuat(b,m);
    printf ("Cac phan tu sau khi noi la: ");
    NOIMANG(a,b,n,m);
getch( );
return 0;
}

```

## ĐỀ 38

### 38.1

```

#include <stdio.h>
#include <conio.h>
#include <math.h>
void nhap(int a[], int n) {
    for (int i=0; i<n; i++) scanf("%d",&a[i]);
}
int UCLN(int a, int b) {
    if (a%b==0) return b;
    return UCLN(b,a%b);
}
int BCNN(int a, int b) {
    return ( fabs(a*b) ) / UCLN(a,b);
}
main ( ) {
    int a[100], n, p, k,i;
    printf ("Nhap n>=2: ");
    scanf ("%d",&n);
    nhap(a,n);
    p=UCLN(a[0],a[1]);
    k=BCNN(a[0], a[1]);
    for (i=2; i<n; i++) {
        p=UCLN(p,a[i]);
        k=BCNN(k,a[i]);
    }
    printf ("BCNN = %d\nUCLN = %d",k,p);
getch( );

```

```
return 0;
}
```

### 38.2

```
#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n, char ch) {
    for (int i=0; i<n; i++) {
        printf ("%c[%d] = ",ch,i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void NOIMANG(float a[], float b[], int n, int m) {
    int i, j=0;
    for (i=m; i<n+m; i++) {
        b[i] = a[j];
        j++;
    }
    for (i=0; i<n+m; i++) {
        for (j=i+1; j<n+m; j++) {
            if (b[i] < b[j]) {
                float tg=b[j];
                b[j]=b[i];
                b[i]=tg;
            }
        }
        printf ("%6.2f",b[i]);
    }
}
main ( ) {
    int n, m; float a[100], b[100];
    printf ("Nhap so phan tu cua A: ");
    scanf ("%d",&n);
    printf ("Nhap mang A:\n");
    nhap(a,n,'A');
    printf ("Nhap so phan tu cua B: ");
    scanf ("%d",&m);
    printf ("Nhap mang B:\n");
    nhap(b,m,'B');
```

```

    printf ("Cac phan tu cua A la: ");
    xuat(a,n);
    printf ("Cac phan tu cua B la: ");
    xuat(b,m);
    printf ("Cac phan tu sau khi noi la: ");
    NOIMANG(a,b,n,m);
getch( );
return 0;
}

```

**ĐỀ 39****39.1**

```

#include <stdio.h>
#include <conio.h>
void doicoso(int n, int coso){
    if (n>=coso) doicoso(n/coso,coso);
    printf
("%c", (n%coso) ["0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ"]);
}
main ( ) {
    int n, coso;
    printf ("Nhap n: ");
    scanf ("%d",&n);
    printf ("Nhap co so: ");
    scanf ("%d",&coso);
    printf ("%d sang co so %d = ",n,coso);
    doicoso(n,coso);
getch( );
return 0;
}

```

**39.2**

```

#include <stdio.h>
#include <conio.h>
int demsolvingso2(int n) {
    int dem=0;
    while(n%2==0) {
        n/=2;
        dem++;
    }
    return dem;
}
int demsolvingso5(int n) {
    int dem=0;

```

```

        while(n%5==0) {
            n/=5;
            dem++;
        }
        return dem;
    }
main ( ) {
    int n, i, a[100], dem2=0, dem5=0, dem25=0;
    printf ("Nhap so luong cac so can tinh: ");
    scanf ("%d",&n);
    for (i=0; i<n; i++) scanf ("%d",&a[i]);
    for (i=0; i<n; i++) {
        if (a[i] == 0) {
            printf ("So chu so 0 tan cung cua tich cac so tren
la: 1");
            return 0;
        }
        if (a[i]%2==0) dem2+=demsoluongso2(a[i]);
        if (a[i]%5==0) dem5+=demsoluongso5(a[i]);
        if (dem2<=dem5) dem25=dem2;
        else dem25=dem5;
    }
    printf ("So chu so 0 tan cung cua tich cac so tren la:
%d",dem25);
    getch( );
    return 0;
}

```

**ĐỀ 40****40.1**

```

#include <stdio.h>
#include <conio.h>
int dx(int n) {
    int k=0; // So nguoc cua n
    int tg=n;
    while(tg>0) {
        k=k*10+tg%10;
        tg/=10;
    }
    return (n==k);
}
main ( ) {
    int n;

```

```

    printf ("Nhap n: ");
    scanf ("%d",&n);
    if ( dx(n) ) printf ("La so tu doi xung");
    else printf ("Khong phai la so tu doi xung");
getch( );
return 0;
}

```

## 40.2

```

#include <stdio.h>
#include <conio.h>
int demsoluongso2(int n) {
    int dem=0;
    while (n%2==0){
        n/=2;
        dem++;
    }
    return dem;
}
int demsoluongso5(int n) {
    int dem=0;
    while (n%5==0) {
        n/=5;
        dem++;
    }
    return dem;
}
main ( ) {
    int n, i, a[100], dem2=0, dem5=0, dem25;
    printf ("Nhap so luong cac so can tinh: ");
    scanf ("%d",&n);
    for (i=0; i<n; i++) scanf ("%d",&a[i]);
    for (i=0; i<n; i++) {
        if (a[i]==0) {
            printf ("So chu so 0 tan cung cua tich cac so tren
la: 1");
            return 0;
        }
        if (a[i]%2==0) dem2+=demsoluongso2(a[i]);
        if (a[i]%5==0) dem5+=demsoluongso5(a[i]);
        if (dem2<=dem5) dem25=dem2;
        else dem25=dem5;
    }
}

```

```

    printf ("So chu so 0 tan cung cua tich cac so tren la:
%d",dem25);
getch( );
return 0;
}

```

## ĐỀ 41

### 41.1

```

#include <stdio.h>
#include <conio.h>
int tohop(int k, int n){
    if (k==n||k==0) return 1;
    return tohop(k-1, n-1) + tohop(k,n-1);
}
main ( ) {
    int k,n,i,j;
    printf ("Nhap k, n: ");
    scanf ("%d%d",&k,&n);
    printf ("To hop chap %d cua %d la: %d\n\n",k,n,tohop(k,n));
    printf ("_____Ve tam giac
Pascal_____\\n\\n");
    for (i=0; i<n; i++) {
        for (j=0; j<=n-i; j++) printf ("  ");
        for (j=0; j<=i; j++) printf ("%6d",tohop(j,i));
        printf ("\\n");
    }
    getch( );
    return 0;
}

```

### 41.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n, char ch) {
    for (int i=0; i<n; i++) {
        printf ("%c[%d] = ",ch,i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\\n");
}
void NOIMANG(float a[], float b[], int n, int m) {

```

```

    int i, j=0;
    for (i=m; i<n+m; i++) {
        b[i] = a[j];
        j++;
    }
    for (i=0; i<n+m; i++) {
        for (j=i+1; j<n+m; j++) {
            if (b[i] > b[j]) {
                float tg=b[j];
                b[j]=b[i];
                b[i]=tg;
            }
        }
        printf ("%6.2f",b[i]);
    }
}

main ( ) {
    int n, m; float a[100], b[100];
    printf ("Nhap so phan tu cua A: ");
    scanf ("%d",&n);
    printf ("Nhap mang A:\n");
    nhap(a,n,'A');
    printf ("Nhap so phan tu cua B: ");
    scanf ("%d",&m);
    printf ("Nhap mang B:\n");
    nhap(b,m,'B');
    printf ("Cac phan tu cua A la: ");
    xuat(a,n);
    printf ("Cac phan tu cua B la: ");
    xuat(b,m);
    printf ("Cac phan tu sau khi noi la: ");
    NOIMANG(a,b,n,m);
    getch( );
    return 0;
}

```

**ĐỀ 42****42.1**

```

#include <stdio.h>
#include <conio.h>
void doicoso(int n, int coso){
    if (n>=coso) doicoso(n/coso,coso);
}

```



```

    printf
    ("%c", (n%coso) ["0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ"]);
}
main ( ) {
    int n, coso;
    printf ("Nhap n: ");
    scanf ("%d",&n);
    printf ("Nhap co so: ");
    scanf ("%d",&coso);
    printf ("%d sang co so %d = ",n,coso);
    doicoso(n,coso);
getch( );
return 0;
}

```

## 42.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n, char ch) {
    for (int i=0; i<n; i++) {
        printf ("%c[%d] = ",ch,i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void NOIMANG(float a[], float b[], int n, int m) {
    int i, j=0;
    for (i=m; i<n+m; i++) {
        b[i] = a[j];
        j++;
    }
    for (i=0; i<n+m; i++) {
        for (j=i+1; j<n+m; j++) {
            if (b[i] > b[j]) {
                float tg=b[j];
                b[j]=b[i];
                b[i]=tg;
            }
        }
    }
    printf ("%6.2f",b[i]);
}

```

```

    }
}
main ( ) {
    int n, m; float a[100], b[100];
    printf ("Nhap so phan tu cua A: ");
    scanf ("%d",&n);
    printf ("Nhap mang A:\n");
    nhap(a,n,'A');
    printf ("Nhap so phan tu cua B: ");
    scanf ("%d",&m);
    printf ("Nhap mang B:\n");
    nhap(b,m,'B');
    printf ("Cac phan tu cua A la: ");
    xuat(a,n);
    printf ("Cac phan tu cua B la: ");
    xuat(b,m);
    printf ("Cac phan tu sau khi noi la: ");
    NOIMANG(a,b,n,m);
    getch( );
    return 0;
}

```

## ĐỀ 43

### 43.1

```

#include <stdio.h>
#include <conio.h>
void dem(float a[] ){
    int i,j,k,l,dem=0;
    for (i=0; i<4; i++) {
        for (j=0; j<4; j++) {
            for (k=0; k<4; k++) {
                for (l=0; l<4; l++) {
                    if (j!=i && (k!=j && k!=i) && (l!=k && l!=j
&& l!=i) && a[i]!=0) {
                        printf
("%0.2f\n",a[i]*10+a[j]+a[k]/10+a[l]/100);
                        dem++;
                    }
                }
            }
        }
    }
    printf ("Co %d so",dem);
}

```

```

}
main ( ) {
    float a[] = {0,1,2,3};
    dem(a);
    getch( );
    return 0;
}

```

### 43.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n, char ch) {
    for (int i=0; i<n; i++) {
        printf ("%c[%d] = ",ch,i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void NOIMANG(float a[], float b[], int n, int m) {
    int i, j=0;
    for (i=m; i<n+m; i++) {
        b[i] = a[j];
        j++;
    }
    for (i=0; i<n+m; i++) {
        for (j=i+1; j<n+m; j++) {
            if (b[i] > b[j]) {
                float tg=b[j];
                b[j]=b[i];
                b[i]=tg;
            }
        }
        printf ("%6.2f",b[i]);
    }
}
main ( ) {
    int n, m; float a[100], b[100];
    printf ("Nhap so phan tu cua A: ");
    scanf ("%d",&n);
    printf ("Nhap mang A:\n");
}

```

```

    nhap(a,n,'A');
    printf ("Nhap so phan tu cua B: ");
    scanf ("%d",&m);
    printf ("Nhap mang B:\n");
    nhap(b,m,'B');
    printf ("Cac phan tu cua A la: ");
    xuat(a,n);
    printf ("Cac phan tu cua B la: ");
    xuat(b,m);
    printf ("Cac phan tu sau khi noi la: ");
    NOIMANG(a,b,n,m);
getch( );
return 0;
}

```

## ĐỀ 44

### 44.1

```

#include <stdio.h>
#include <conio.h>
void dem(float a[] ){
    int i,j,k,l,dem=0;
    for (i=0; i<4; i++) {
        for (j=0; j<4; j++) {
            for (k=0; k<4; k++) {
                for (l=0; l<4; l++) {
                    if (j!=i && (k!=j && k!=i) && (l!=k && l!=j
&& l!=i) && a[i]!=0) {
                        printf
("%0.0f\n",a[i]*1000+a[j]*100+a[k]*10+a[l]);
                        dem++;
                    }
                }
            }
        }
    }
    printf ("Co %d so",dem);
}
main ( ) {
    float a[]= {0,2,3,5};
    dem(a);
getch( );
return 0;
}

```

## 44.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n, char ch) {
    for (int i=0; i<n; i++) {
        printf ("%c[%d] = ",ch,i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void NOIMANG(float a[], float b[], int n, int m) {
    int i, j=0;
    for (i=m; i<n+m; i++) {
        b[i] = a[j];
        j++;
    }
    for (i=0; i<n+m; i++) {
        for (j=i+1; j<n+m; j++) {
            if (b[i] > b[j]) {
                float tg=b[j];
                b[j]=b[i];
                b[i]=tg;
            }
        }
        printf ("%6.2f",b[i]);
    }
}
main ( ) {
    int n, m; float a[100], b[100];
    printf ("Nhap so phan tu cua A: ");
    scanf ("%d",&n);
    printf ("Nhap mang A:\n");
    nhap(a,n,'A');
    printf ("Nhap so phan tu cua B: ");
    scanf ("%d",&m);
    printf ("Nhap mang B:\n");
    nhap(b,m,'B');
    printf ("Cac phan tu cua A la: ");
    xuat(a,n);
}

```

```

    printf ("Cac phan tu cua B la: ");
    xuat(b,m);
    printf ("Cac phan tu sau khi noi la: ");
    NOIMANG(a,b,n,m);
getch( );
return 0;
}

```

## ĐỀ 45

### 45.1

```

#include <stdio.h>
#include <conio.h>
void trunggian(float a, float b, float c) {
    float max, min;
    max = a;
    if (b > max) {
        max = b;
        min = a;
    }
    else min = b;
    if (c == min||c == max||max == min) printf ("Khong co so trung
gian");
    else if (c > max) printf ("So trung gian la: %.2f",max);
    else if (c < max ) printf ("So trung gian la: %.2f",min);
    else printf ("So trung gian la: %.2f",c);
}
void trunggian1(float a, float b, float c) {
    float max, min;
    max = a;
    min = (b > max) ? a : b;
    max = (b > max) ? b : a;
    (c == min||c == max||max == min) ? printf ("Khong co so trung
gian") :
        (c > max) ? printf ("So trung gian la: %.2f",max) :
            (c < max) ? printf ("So trung gian la: %.2f",min) :
                printf ("So trung gian la: %.2f",c);
}
main ( ) {
    float a, b, c;
    printf ("Nhap a, b, c: ");
    scanf ("%f%f%f",&a,&b,&c);
    trunggian1(a,b,c);
getch( );
}

```

```
return 0;
}
```

## 45.2

```
#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n, char ch) {
    for (int i=0; i<n; i++) {
        printf ("%c[%d] = ",ch,i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void NOIMANG(float a[], float b[], int n, int m) {
    int i, j=0;
    for (i=m; i<n+m; i++) {
        b[i] = a[j];
        j++;
    }
    for (i=0; i<n+m; i++) {
        for (j=i+1; j<n+m; j++) {
            if (b[i] > b[j]) {
                float tg=b[j];
                b[j]=b[i];
                b[i]=tg;
            }
        }
        printf ("%6.2f",b[i]);
    }
}
main ( ) {
    int n, m; float a[100], b[100];
    printf ("Nhap so phan tu cua A: ");
    scanf ("%d",&n);
    printf ("Nhap mang A:\n");
    nhap(a,n,'A');
    printf ("Nhap so phan tu cua B: ");
    scanf ("%d",&m);
    printf ("Nhap mang B:\n");
    nhap(b,m,'B');
```

```

printf ("Cac phan tu cua A la: ");
xuat(a,n);
printf ("Cac phan tu cua B la: ");
xuat(b,m);
printf ("Cac phan tu sau khi noi la: ");
NOIMANG(a,b,n,m);
getch( );
return 0;
}

```

## ĐỀ 46

### 46.1

```

#include <stdio.h>
#include <conio.h>
void trunggian(float a, float b, float c) {
    float max, min;
    max = a;
    if (b > max) {
        max = b;
        min = a;
    }
    else min = b;
    if (c == min||c == max||max == min) printf ("Khong co so trung
gian");
    else if (c > max) printf ("So trung gian la: %.2f",max);
    else if (c < max ) printf ("So trung gian la: %.2f",min);
    else printf ("So trung gian la: %.2f",c);
}
void trunggian1(float a, float b, float c) {
    float max, min;
    max = a;
    min = (b > max) ? a : b;
    max = (b > max) ? b : a;
    (c == min||c == max||max == min) ? printf ("Khong co so trung
gian") :
        (c > max) ? printf ("So trung gian la: %.2f",max) :
            (c < max) ? printf ("So trung gian la: %.2f",min) :
                printf ("So trung gian la: %.2f",c);
}
main ( ) {
    float a, b, c;
    printf ("Nhap a, b, c: ");
    scanf ("%f%f%f",&a,&b,&c);
}

```



```

    trunggian(a,b,c);
getch( );
return 0;
}

```

## 46.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n, char ch) {
    for (int i=0; i<n; i++) {
        printf ("%c[%d] = ",ch,i);
        scanf ("%f", &a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\n");
}
void NOIMANG(float a[], float b[], int n, int m) {
    int i, j=0;
    for (i=m; i<n+m; i++) {
        b[i] = a[j];
        j++;
    }
    for (i=0; i<n+m; i++) {
        for (j=i+1; j<n+m; j++) {
            if (b[i] < b[j]) {
                float tg=b[j];
                b[j]=b[i];
                b[i]=tg;
            }
        }
        printf ("%6.2f",b[i]);
    }
}
main ( ) {
    int n, m; float a[100], b[100];
    printf ("Nhap so phan tu cua A: ");
    scanf ("%d",&n);
    printf ("Nhap mang A:\n");
    nhap(a,n,'A');
    printf ("Nhap so phan tu cua B: ");
    scanf ("%d",&m);
}

```

```

printf ("Nhap mang B:\n");
nhap(b,m,'B');
printf ("Cac phan tu cua A la: ");
xuat(a,n);
printf ("Cac phan tu cua B la: ");
xuat(b,m);
printf ("Cac phan tu sau khi noi la: ");
NOIMANG(a,b,n,m);
getch( );
return 0;
}

```

**ĐỀ 47****47.1**

```

#include <stdio.h>
#include <conio.h>
void in(float a[]);
main ( ) {
    float a[]={0,2,3,5};
    in(a);
    getch( );
    return 0;
}
void in(float a[]) {
    int i,j,k,l,dem=0;
    for (i=0; i<4; i++) {
        for (j=0; j<4; j++) {
            for (k=0; k<4; k++) {
                for (l=0; l<4; l++) {
                    if (j!=i && (k!=j && k!=i) && (l!=k && l!=j
&& l!=i) && a[i]!=0){
                        printf
("%0.0f\n",a[i]*1000+a[j]*100+a[k]*10+a[j]);
                        dem++;
                    }
                }
            }
        }
    }
    printf ("Co %d so",dem);
}

```

**47.2**

```

#include <stdio.h>

```

```

#include <conio.h>
int demsoluongso2(int n) {
    int dem=0;
    while(n%2==0) {
        n/=2;
        dem++;
    }
    return dem;
}
int demsoluongso5(int n) {
    int dem=0;
    while(n%5==0) {
        n/=5;
        dem++;
    }
    return dem;
}
main ( ) {
    int n, i, a[100], dem2=0, dem5=0, dem25=0;
    printf ("Nhap so luong cac so can tinh: ");
    scanf ("%d",&n);
    for (i=0; i<n; i++) scanf ("%d",&a[i]);
    for (i=0; i<n; i++) {
        if (a[i] == 0) {
            printf ("So chu so 0 tan cung cua tich cac so tren
la: 1");
            return 0;
        }
        if (a[i]%2==0) dem2+=demsoluongso2(a[i]);
        if (a[i]%5==0) dem5+=demsoluongso5(a[i]);
        if (dem2<=dem5) dem25=dem2;
        else dem25=dem5;
    }
    printf ("So chu so 0 tan cung cua tich cac so tren la:
%d",dem25);
    getch( );
    return 0;
}

```

**ĐỀ 48****48.1**

```

#include <stdio.h>
#include <conio.h>

```

```

int tohop(int k, int n) {
    if (k==n||k==0) return 1;
    return tohop(k-1,n-1) + tohop(k,n-1);
}
main ( ) {
    int k,n,i,j;
    printf ("Nhap k, n: ");
    scanf ("%d%d",&k,&n);
    printf ("To hop chap %d cua %d la: %d\n\n",k,n,tohop(k,n));
    printf ("_____Ve tam giac
Pascal_____\\n\\n");
    for (i=0; i<n; i++) {
        for (j=0; j<n-i; j++) printf ("  ");
        for (j=0; j<=i; j++) printf ("%6d",tohop(j,i));
        printf ("\\n");
    }
    getch( );
    return 0;
}

```

## 48.2

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f",&a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);
    printf ("\\n");
}
void xoa(float a[], int &n){
    int i,j;
    for (i=0; i<n; i++) {
        do {
            if (a[i] < 0){
                for(j=i; j<n-1; j++) {
                    a[j] = a[j+1];
                }
                n--;
            }
        }
    }
}

```

```

    }
    while (a[i]<0);
    printf ("%6.2f",a[i]);
}
}
main ( ) {
    int n;
    printf ("Nhap n: ");
    scanf ("%d",&n);
    float a[n];
    printf ("Nhap mang: \n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Cac phan tu sau khi xoa la: ");
    xoa(a,n);
    getch( );
    return 0;
}

```

**ĐỀ 49****49.1**

```

#include <stdio.h>
main ( ) {
    printf ("_____Bang cuu
chuong _____\n\n");
    int i,j;
    for (i = 1; i<=10; i++) {
        for (j =2 ; j<= 10; j++)
            printf ("%3d x %2d =%3d",j,i,i*j);
        printf ("\n");
    }
    return 0;
}

```

**49.2**

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f",&a[i]);
    }
}

```

```
}  
void xuat(float a[], int n) {  
    for (int i=0; i<n; i++) printf ("%6.2f", a[i]);  
    printf ("\n");  
}  
int kt(float n) {  
    if (n<2) return 0;  
    if (n == (int) n) {  
        for (int i=2; i*i<=n; i++) if ((int) n%i == 0) return 0;  
        return 1;  
    }  
    else return 0;  
}  
void TONG(float a[], int n) {  
    int i; float s=0;  
    for (i=0; i<n; i++){  
        if ( kt(a[i]) ) s+=a[i];  
    }  
    printf ("Tong cac so nguyen to la: %.2f",s);  
}  
main ( ) {  
    int n;  
    do {  
        printf ("Nhap n: ");  
        scanf ("%d",&n);  
        if (n<15) printf ("Nhap n>=15\n");  
    }  
    while (n<15);  
    float a[n];  
    printf ("Nhap mang:\n");  
    nhap(a,n);  
    printf ("Cac phan tu cua mang la: ");  
    xuat(a,n);  
    TONG(a,n);  
    getch( );  
    return 0;  
}
```

**ĐỀ 50****50.1**

```

#include <stdio.h>
#include <conio.h>
int tohop(int k, int n){
    if(k==n||k==0) return 1;
    return tohop(k-1,n-1) + tohop(k,n-1);
}
main ( ) {
    int k,n,i,j;
    printf ("Nhap k , n: ");
    scanf ("%d%d",&k,&n);
    printf ("To hop chap %d cua %d la: %d\n\n",k,n,tohop(k,n));
    printf ("_____Ve tam giac
Pascal_____\\n\\n");
    for (i=0; i<n; i++) {
        for (j=0; j<=n-i; j++) printf ("  ");
        for (j=0; j<=i; j++) printf ("%6d",tohop(j,i));
        printf "\\n");
    }
    getch( );
    return 0;
}

```

**50.2**

```

#include <stdio.h>
#include <conio.h>
void nhap(float a[], int n) {
    for (int i=0; i<n; i++) {
        printf ("A[%d] = ",i);
        scanf ("%f",&a[i]);
    }
}
void xuat(float a[], int n) {
    for (int i=0; i<n; i++) printf ("%6.2f",a[i]);
    printf "\\n");
}
void xoa(float a[], int &n, int k) {
    int i, j;
    for (i=0; i<n; i++){
        if (k==i) {
            for (j=k; j<n-1; j++) a[j] = a[j+1];
            n--;
        }
    }
}

```

```
        }
        printf ("%6.2f",a[i]);
    }
}
main ( ) {
    int n,k;
    printf ("Nhap n: ");
    scanf ("%d",&n);
    float a[n];
    printf ("Nhap mang:\n");
    nhap(a,n);
    printf ("Cac phan tu cua mang la: ");
    xuat(a,n);
    printf ("Nhap k: ");
    scanf ("%d",&k);
    printf ("Cac phan tu sau khi xoa phan tu co chi so k la: ");
    xoa(a,n,k);
    getch( );
    return 0;
}
```