Problem No : 2302056_07

Problem Name : Write a C program to display following variables.
a+ c, x + c,dx + x, ((int) dx) + ax, a + x, s + b, ax + b, s + c, ax + c, ax + ux

Input :

```c
#include<stdio.h>

int main()
{
    /* Declaration*/
    int a = 125, b = 12345;
    long ax = 1234567890;
    short s = 4043;
    float x = 2.13459;
    double dx = 1.1415927;
    char c = 'W';
    unsigned long ux = 2541567890;
    /* varius arithmetic operations and type conversions*/
    printf("a+c = %d\n",a+c);
    printf("x+c = %f\n",x+c);
    printf("dx+x = %f\n",dx+x);
    printf("((int)dx)+ax = %ld\n",((int)dx)+ax);
    printf("a+x = %f\n",a+x);
    printf("s+b = %d\n",s+b);
    printf("ax+b = %ld\n",ax+b);
```

```
21      printf("s+c = %hd\n",s+c);
22      printf("ax+c = %ld\n",ax+c);
23      printf("ax+ux = %lu\n",ax+ux);
24      return 0;
25  }
```

Output :

```
a+c = 212
x+c = 89.134590
dx+x = 3.276183
((int)dx)+ax = 1234567891
a+x = 127.134590
s+b = 16388
ax+b = 1234580235
s+c = 4130
ax+c = 1234567977
ax+ux = 3776135780
```

Problem No : 2302056_08

Problem Name : Write a C program to convert specified days into years, weeks and days.

Input :

```c
#include<stdio.h>

int main()
{
    int givenNoDays,years,weeks,days;
    printf ("Enter the No of days :");
    scanf("%d",&givenNoDays);
    years = givenNoDays/365;
    weeks = (givenNoDays%365)/7;
    days = givenNoDays-((years*365)+(weeks*7));
    printf ("Years :%d\n",years);
    printf ("weeks :%d\n",weeks);
    printf ("days :%d\n",days);
    return 0;
}
```

Output :

```
Enter the No of days :1329
Years :3
weeks :33
days :3
```

Problem No : 2302056_09

Problem Name : Write a C program that accepts two integers from the user and calculates the sum of the two integers.

Input :

```c
#include<stdio.h>

int main()
{
    int a,b,sum;
    printf("Enter the first number :");
    scanf("%d",&a);
    printf("Enter the second number :");
    scanf("%d",&b);
    sum = a+b;
    printf("Sum of a and b :%d",sum);
    return 0;
}
```

Output :

```
Enter the first number :25
Enter the second number :38
Sum of a and b :63
```

Problem No : 2302056_10

Problem Name : Write a C program that accepts two integers from the user and calculates the product of the two integers.

Input :

```c
#include<stdio.h>

int main()
{
    int a,b,prdct;
    printf("Enter the first number :");
    scanf("%d",&a);
    printf("Enter the second number :");
    scanf("%d",&b);
    prdct = a*b;
    printf("Product of a and b :%d",prdct);
    return 0;
}
```

Output :

```
Enter the first number :25
Enter the second number :15
Product of a and b :375
```

Problem No : 2302056_11

Problem Name : Write a C program that accepts two item's weight and number of purchases (floating point values) and calculates their average value.

Input :

```c
#include<stdio.h>


int main()
{
    //declaration
    //collect input
    printf("Enter Weight-Item1 :");
    scanf("%lf",&wt1);
    printf("Enter No of Item1 :");
    scanf("%lf",&noItem1);
    printf("Enter Weight-Item2 :");
    scanf("%lf",&wt2);
    printf("Enter No of Item2 :");
    scanf("%lf",&noItem2);
    //callculating avarage
    avrg=((wt1*noItem1)+(wt2*noItem2))/(noItem1+noItem2);
    //printing average
    printf("The avarage is :%lf",avrg);
    return 0;
}
```

Output :

```
Enter Weight-Item1 :15
Enter No of Item1 :5
Enter Weight-Item2 :25
Enter No of Item2 :4
The avarage is :19.444444
```

Problem No : 2302056_12

Problem Name : Write a C program that accepts an employee's ID, total worked hours in a month and the amount he received per hour. Print the ID and salary (with two decimal places) of the employee for a particular month.

Input :

```c
#include<stdio.h>

int main()
{
    // Declaration
    int hours;
    char id[10];
    double hourSalary,totalSalary;
    // Data input
    printf("Enter the employee ID :");
    scanf("%s",id);
    printf("Enter working time :");
    scanf("%d",&hours);
    printf("Enter salary amount per hour :");
    scanf("%lf",&hourSalary);
    totalSalary=hours*hourSalary;
    printf("Employee ID = %s\n Total Salary = %.2lf taka",id,totalSalary);
    return 0;
}
```

Output :

```
Enter the employee ID :2302056
Enter working time :8
Enter salary amount per hour :15000
Employee ID = 2302056
Total Salary = 120000.00 taka
```

Problem No :2302056_13

Problem Name : Write a C program that accepts three integers and finds the maximum of three.

Input :

```c
#include<stdio.h>

int main()
{
    int a,b,c;
    printf("Enter the first number :");
    scanf("%d",&a);
    printf("Enter the second number :");
    scanf("%d",&b);
    printf("Enter the third number :");
    scanf("%d",&c);
    if(a>b){
        if(a>c){
            printf("The maximam value of three numbers :%d",a);
        }else{
            printf("The maximum value of three numbers :%d",c);
        }
    }else{
        if(b>c){
            printf("The maximam value of three numbers :%d",b);
        }else{
            printf("The maximam value of three numbers :%d",c);
        }
    }
    return 0;
}
```

Output :

```
Enter the first number :10
Enter the second number :15
Enter the third number :12
The maximam value of three numbers :15
```

Problem No :2302056_14

Problem Name : Write a C program to calculate a bike's average consumption from the given total distance (integer value) travelled (in km) and spent fuel (in litters, float number – 2 decimal points).

Input :

```c
#include<stdio.h>

int main()
{
    int km;
    float litter,avrgKm;
    printf("Enter total distance :");
    scanf("%d",&km);
    printf("Enter total total fuel spent in litter :");
    scanf("%f",&litter);
    avrgKm = km/litter;
    printf("Avarage Consuption :%.2f",avrgKm);
    return 0;
}
```

Output :

```
Enter total distance :350
Enter total total fuel spent in litter :5
Avarage Consuption :70.00
```

Problem No : 2302056_15

Problem Name : Write a C program to calculate the distance between two points.

Input :

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

int main()
{
    float x1,x2,y1,y2,distance;
    printf("Enter x1 value :");
    scanf("%f",&x1);
    printf("Enter y1 value :");
    scanf("%f",&y1);
    printf("Enter x2 value :");
    scanf("%f",&x2);
    printf("Enter y2 value :");
    scanf("%f",&y2);
    distance = sqrt(pow(x2-x1,2)+pow(y2-y1,2));
    printf("Distance between two point :%.2f",distance);
    return 0;
}
```

Output :

```
Enter x1 value :25
Enter y1 value :15
Enter x2 value :35
Enter y2 value :10
Distance between two point :11.18
```

Problem No : 2302056_16

Problem Name : Write a C program to read an amount (integer value) and break the amount into the smallest possible number of bank notes.

Input :

```c
#include<stdio.h>

int main()
{
    int amount,total;
    printf("Enter the amount :");
    scanf("%d",&amount);
    printf("There are,\n");

    // For 100.00 tk note,
    total = amount/100;
    printf("%d note(s) of 100.00\n",total);
    amount = amount-(total*100);

    // For 50.00 tk note,
    total = amount/50;
    printf("%d note(s) of 50.00\n",total);
    amount = amount-(total*50);

    // For 20.00 tk note,
```

```
    total = amount/20;
    printf("%d notes of 20.00\n",total);
    amount = amount-(total*20);

    // For 10.00 tk note,
    total = amount/10;
    printf("%d note(s) of 10.00\n",total);
    amount = amount-(total*0);

    // For 5.00 tk note,
    total = amount/5;
    printf("%d notes of 5.00\n",total);
    amount = amount-(total*5);

    // For 2.00 tk note,
    total = amount/2;
    printf("%d note(s) of 2.00\n",total);
```

```
38      amount = amount-(total*2);
39
40      // For 1.00 tk note,
41      total = amount/1;
42      printf("%d note(s) of 1.00\n",total);
43      return 0;
44  }
```

Output :

```
Enter the amount :325
There are,
3 note(s) of 100.00
0 note(s) of 50.00
1 notes of 20.00
0 note(s) of 10.00
1 notes of 5.00
0 note(s) of 2.00
0 note(s) of 1.00
```

Problem No : 2302056_17

Problem Name : Write a C program to convert a given integer (in seconds) to hours, minutes and seconds.

Input :

```c
#include<stdio.h>

int main()
{
    int number,hour,min,sec;
    printf("Enter the number(in second) :");
    scanf("%d",&number);
    // convert second -> hour
    hour = (number/60)/60;
    min = (number%3600)/60;
    sec = number%60;
    printf("Hours :%d\n",hour);
    printf("Minutes :%d\n",min);
    printf("Second :%d\n",sec);
    return 0;
}
```

Output :

```
Enter the number(in second) :25300
Hours :7
Minutes :1
Second :40
```

Problem No : 2302056_18

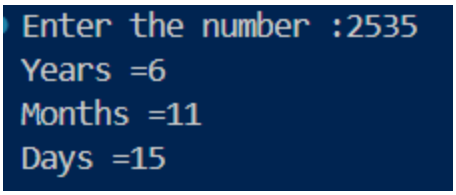
Problem Name : Write a C program to convert a given integer (in days) to years, months and days, assuming that all months have 30 days and all years have 365 days.

Input :

```c
#include<stdio.h>

int main()
{
    int number,years,months,days;
    printf("Enter the number :");
    scanf("%d",&number);
    years = number/365;
    months = (number%365)/30;
    days = ((number%365)%30);
    printf("Years =%d\n",years);
    printf("Months =%d\n",months);
    printf("Days =%d\n",days);
    return 0;
}
```

Output :



Problem No : 2302056_19

Problem Name : Write a C program that accepts 4 integers p, q, r, s from the user where q, r and s are positive and p is even. If q is greater than r and s is greater than p and if the sum of r and s is greater than the sum of p and q print "Correct values", otherwise print "Wrong values".

Input :

```c
#include<stdio.h>

int main()
{
    int p,q,r,s;
    printf("Enter p :");
    scanf("%d",&p);
    printf("Enter q :");
    scanf("%d",&q);
    printf("Enter r :");
    scanf("%d",&r);
    printf("Enter s :");
    scanf("%d",&s);

    if((q>r) && (s>p) && (r+s) && (p+q) && (q>0) && (r>0) && (s>0) && (p%2==0)){
        printf("Correct Values");
    } else{
        printf("Wrong values");
    }
    return 0;
}
```

Output :

```
Enter p :25
Enter q :35
Enter r :15
Enter s :26
Wrong values
```

Problem No :2302056_20

Problem Name : Write a C program to print the roots of Bhaskara's formula from the given three floating numbers. Display a message if it is not possible to find the roots.

Input :

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

int main()
{
    double a,b,c,checker;
    printf("Enter a :");
    scanf("%lf",&a);
    printf("Enter b :");
    scanf("%lf",&b);
    printf("Enter c :");
    scanf("%lf",&c);
    checker = pow(b,2)-4*a*c;
    if(checker>0 && a!=0){
        checker = sqrt(checker);
        double x,y;
        x = (-b+checker)/(2*a);
        y = (-b-checker)/(2*a);
        printf("Root1 = %.5lf\n",x);
        printf("Root2 = %.5lf\n",y);
```

```
21      }
22      return 0;
23  }
```

Output :

```
Enter a :25
Enter b :35
Enter c :12
Root1 = -0.60000
Root2 = -0.80000
```

Problem No : 2302056_21

Problem Name : Write a C program that reads an integer and checks the specified range to which it belongs. Print an error message if the number is negative and greater than 80.
Specified Range: [0, 20], [21, 40], [41, 60], [61, 80] .

Input :

```c
#include<stdio.h>

int main()
{
    int x;
    printf("Enter the number :");
    scanf("%d",&x);
    if(x>=0 && x<=80){
        if(x>=0 && x<=20){
            printf("Range [0,20]");
        } if(x>=21 && x<=40){
            printf("Range [21,40]");
        } if(x>=41 && x<=60){
            printf("Range [41,60]");
        } if(x>61 && x<=80){
            printf("Range [61,80]");
        }
    } else{
        printf("Outside the range");
    }
}
```

Output :

```
Enter the number :15
Range [0,20]
```

Problem No : 2302056_22

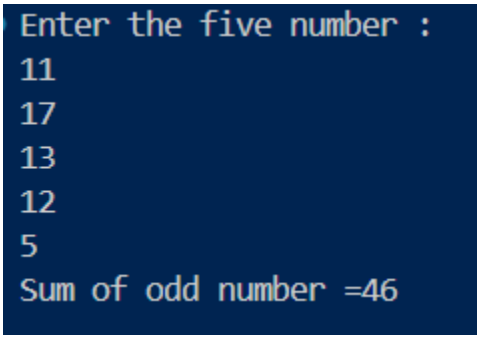
Problem Name : Write a C program that reads 5 numbers and sums all odd values between them.

Input :

```c
#include<stdio.h>

int main()
{
    int arr[5];
    int sum = 0;
    printf("Enter the five number :\n");
    for(int i=1; i<=5; i++){
        scanf("%d",&arr[i]);
        if(arr[i]%2!=0){
            sum = sum+arr[i];
        }
    }
    printf("Sum of odd number =%d\n",sum);
    return 0;
}
```

Output :



Problem No :2302056_23

Problem Name : Write a C program that reads three floating-point values and checks if it is possible to make a triangle with them. Determine the perimeter of the triangle if the given values are valid.

Input :

```c
#include<stdio.h>

int main()
{
    float a,b,c;
    printf("Enter first arm of the triangle :");
    scanf("%f",&a);
    printf("Enter second arm of the triangle :");
    scanf("%f",&b);
    printf("Enter third arm of the triangle :");
    scanf("%f",&c);

    if((a+b)>c && (b+c)>a && (c+a)>b){
        printf("The triangle premeter is =%.2f",a+b+c);
    }else{
        printf("Not possible to create a triangle");
    }
    return 0;
}
```

Output :

```
Enter first arm of the triangle :25
Enter second arm of the triangle :15
Enter third arm of the triangle :35
The triangle premeter is =75.00
```

Problem No : 2302056_24

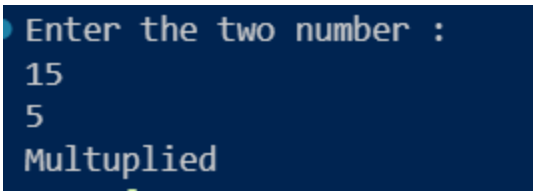
Problem Name : Write a C program that reads two integers and checks whether they are multiplied or not.

Input :

```c
#include<stdio.h>

int main()
{
    int a,b;
    printf("Enter the two number :\n");
    scanf("%d",&a);
    scanf("%d",&b);
    if(a%b==0){
        printf("Multuplied");
    } else{
        printf("Not Multiplied");
    }
    return 0;
}
```

Output :



Problem No : 2302056_25

Problem Name : Write a C program that reads an integer between 1 and 12 and prints the month of the year in English.

Input :

```c
#include<stdio.h>

int main()
{
    int months;
    printf("Enter a number between 1 to 12 to get the month name :");
    scanf("%d",&months);

    switch(months){
        case 1 : printf("January");
                 break;
        case 2 : printf("February");
                 break;
        case 3 : printf("March");
                 break;
        case 4 : printf("April");
                 break;
        case 5 : printf("May");
                 break;
        case 6 : printf("June");
```

```
21                  break;
22          case 7 : printf("July");
23                  break;
24          case 8 : printf("August");
25                  break;
26          case 9 : printf("September");
27                  break;
28          case 10 : printf("October");
29                  break;
30          case 11 : printf("November");
31                  break;
32          case 12 : printf("December");
33                  break;
34          default : printf("Enter a number between 1 to 12");
35      }
36      return 0;
37  }
```

Output :

```
Enter a number between 1 to 12 to get the month name :8
August
```

Problem No : 2302056_26

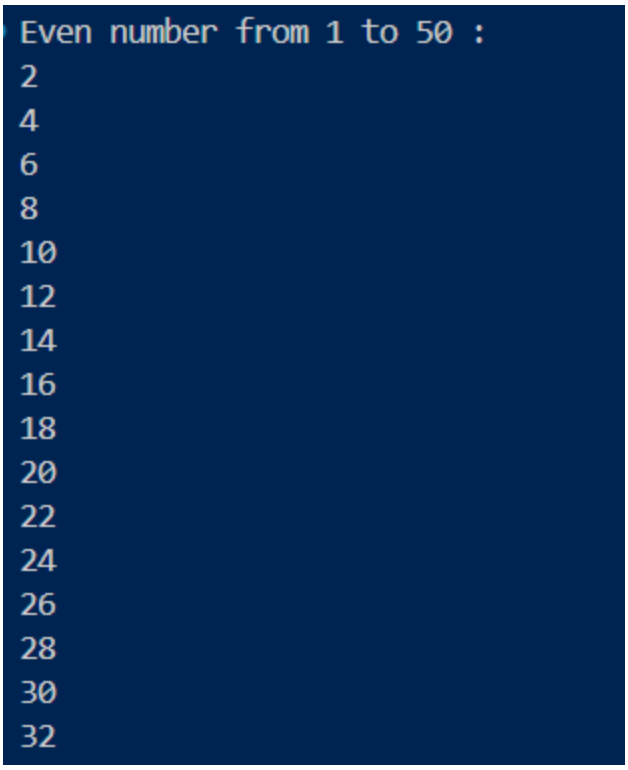
Problem Name : Write a C program that prints all even numbers between 1 and 50 (inclusive).

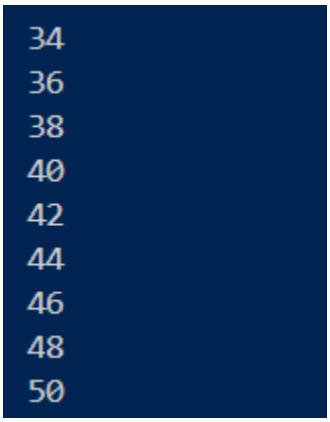
Input :

```c
#include<stdio.h>

int main()
{
    printf("Even number from 1 to 50 :");
    for(int i=1; i<=50; i++){
        if(i%2==0){
            printf("\n%d",i);
        }
    }
    return 0;
}
```

Output :





Problem No : 2302056_27

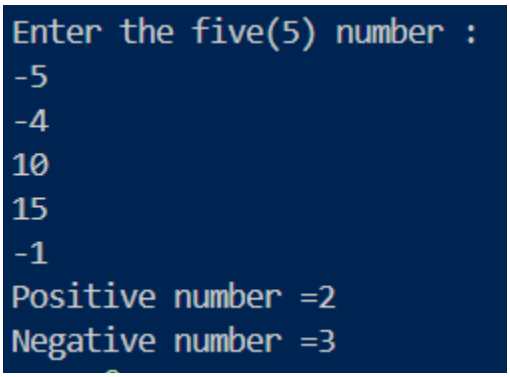
Problem Name : Write a C program that reads 5 numbers and counts the number of positive numbers and negative numbers.

Input :

```c
#include<stdio.h>

int main()
{
    int arr[5];
    int countPos = 0;
    int countNeg = 0;
    printf("Enter the five(5) number :\n");
    for(int i=0; i<=4; i++){
        scanf("%d",&arr[i]);
        if(arr[i]>0){
            countPos++;
        } if(arr[i]<0){
            countNeg++;
        }
    }
    printf("Positive number =%d\n",countPos);
    printf("Negative number =%d",countNeg);
}
```

Output :



Problem No : 2302056_28

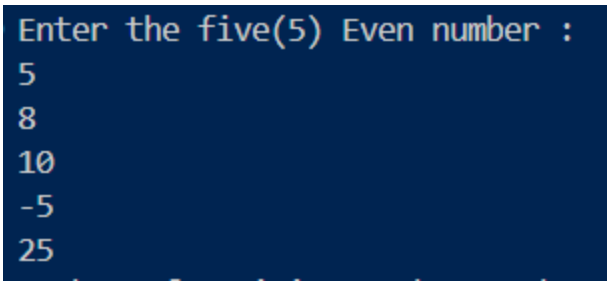
Problem Name : Write a C program that reads 5 numbers, counts the number of positive numbers, and prints out the average of all positive values.

Input :

```c
#include<stdio.h>

int main()
{
    float arr[5];
    int sum = 0;
    int number = 0;
    float evenAvrg;
    printf("Enter the five(5) Even number :\n");
    for(int i=1; i<=5; i++){
        scanf("%f",&arr[i]);
        if(arr[i]>0){
            sum=sum+arr[i];
            number++;
        }
    }
    evenAvrg=sum/number;
    printf("Number of positive number :%d",number);
    printf("The Even number Avarage is :%f",evenAvrg);
    return 0;
}
```

Output:



Problem No:2302056_29

Problem Name: Write a C program that read 5 numbers and sum of all odd values between them.

Input:

```c
#include<stdio.h>

int main()
{
    int arr[5];
    int sum = 0;
    printf("Enter the five(5) Even number :\n");
    for(int i=1; i<=5; i++){
        scanf("%d",&arr[i]);
        if(arr[i]%2!=0){
            sum=sum+arr[i];
        }
    }
    printf("The Even number sum is :%d",sum);
    return 0;
}
```

Output:

```
Enter the five(5) Even number :
5
7
9
10
13
The Even number sum is :34
```

Problem No: 2302056_30

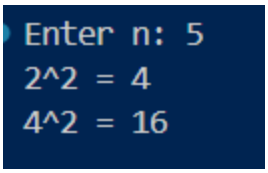
Problem Name: Write a C program to find and print the square of all the even values from 1 to a specified value.

Input:

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

int main()
{
    int n;
    printf("Enter n: ");
    scanf("%d",&n);
    for(int i=1; i<=n; i++){
        if(i%2==0){
            int power = pow(i,2);
            printf("%d^2 = %d\n",i,power);
        }
    }
    return 0;
}
```

Output:



Problem No: 2302056_31

Problem Name: Write a C program to check whether a given integer is positive even, negative even, positive odd or negative odd. Print even if the number is 0.

Input:

```c
#include<stdio.h>

int main()
{
    int a;
    printf("Enter the number: ");
    scanf("%d",&a);
    if(a>0){
        if(a%2==0){
            printf("Positive Even");
        } else{
            printf("Positive odd");
        }
    } else if(a==0){
        printf("Even");
    } else{
        if(a%2==0){
            printf("Negative Even");
        } else{
            printf("Negative Odd");
```

```
21        }
22    }
23    return 0;
24 }
```

Output:

```
Enter the number: 13
Positive odd
```

Problem No: 2302056_32

Problem Name: Write a C program to print all numbers between 1 and 100 which are divided by a specified number and the remainder will be 3.

Input:

```c
#include<stdio.h>

int main()
{
    int n;
    printf("Enter the number: ");
    scanf("%d",&n);
    for(int i=1; i<=100; i++){
        if(i%n==3){
            printf("%d\n",i);
        }
    }
    return 0;
}
```

Output:

```
Enter the number: 25
3
28
53
78
```

Problem No: 2302056_33

Problem Name: Write a C program that accepts some integers from the user and finds the highest value and the input position.

Input:

```c
#include<stdio.h>

int main()
{
    int n;
    int maximum = 0;
    int numPosition = 0;
    printf("Enter the n: ");
    scanf("%d",&n);
        int num[n];
        printf("Enter the %d value :\n",n);
    for(int i=0; i<n; i++){
        scanf("%d",&num[i]);
    }
    for(int i=0; i<n; i++){
        if(num[i]>maximum){    // check if current number is greater than current maximum number
            maximum = num[i];  // update maximum if needed
            numPosition = i+1; // record the position of maximum
        }
    }
    printf("Highest value = %d\nHighest value position : %d",maximum,numPosition);
    return 0;
}
```

Output:

```
Enter the n: 5
Enter the 5 value :
5
7
15
23
45
Highest value = 45
Highest value position : 5
```

Problem No:2302056_34

Problem Name: Write a C program to compute the sum of consecutive odd numbers from a given pair of integers.

Input:

```c
#include<stdio.h>

int main()
{
    int a,b;
    int sum = 0;
    printf("Enter a pair of numvers (for example 10,2):\n");
    printf("Enter first numver of the pair: ");
    scanf("%d",&a);
    printf("Enter the second number of the pair: ");
    scanf("%d",&b);
    if(a<b){
        return 0; // if x is less than y, exit the program
    }
    printf("List of odd number: \n");
    for(int i=b; i<=a; i++){
        if(i%2!=0){
            printf("%d\n",i);
            sum = sum + i;
        }
    }
    printf("Sum = %d\n",sum);
    return 0;
}
```

Output:

```
Enter a pair of numvers (for example 10,2):
Enter first numver of the pair: 10
Enter the second number of the pair: 2
List of odd number:
3
5
7
9
Sum = 24
```

Problem No:2302056_35

Problem Name: Write a C program to check if two numbers in a pair are in ascending order or descending order.

Input:

```c
#include<stdio.h>

int main()
{
    int a,b;
    printf("Enter the first number: ");
    scanf("%d",&a);
    printf("Enter the second number: ");
    scanf("%d",&b);
    if(a>b){
        printf("The order is discending");
    } else{
        printf("The order is ascending");
    }
    return 0;
}
```

Output:

```
Enter the first number: 10
Enter the second number: 2
The order is discending
```

Problem No: 2302056_36

Problem Name: Write a C program to read a password until it is valid. For wrong password print "Incorrect password" and for correct password print, "Correct password" and quit the program. The correct password is 1234.

Input:

```c
#include<stdio.h>

int main()
{
    int pass,x=1;
    while(x!=0){
        printf("Enter the password: ");
        scanf("%d",&pass);
        if(pass==1234){
            printf("Correct Password\n");
            x=0;
        } else{
            printf("Incorrect Password\n");
        }
    }
    return 0;
}
```

Output:

```
Enter the password: 1234
Correct Password
```

Problem No: 2302056_37

Problem Name: Write a C program to read the coordinates (x, y) (in the Cartesian system) and find the quadrant to which it belongs (Quadrant -I, Quadrant -II, Quadrant -III, Quadrant -IV).

Note: A Cartesian coordinate system is a coordinate system that specifies each point uniquely in a plane by a pair of numerical coordinates.

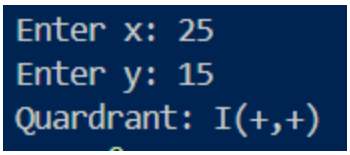
These are often numbered from 1st to 4th and denoted by Roman numerals: I (where the signs of the (x,y) coordinates are I(+,+), II (−,+), III (−,−), and IV (+,−).

Input:

```c
#include<stdio.h>

int main()
{
    int x,y;
    printf("Enter x: ");
    scanf("%d",&x);
    printf("Enter y: ");
    scanf("%d",&y);
    if(x>0 && y>0){
        printf("Quardrant: I(+,+)");
    }else if(x<0 && y>0){
        printf("Quardrant: II(-,+)");
    }else if(x<0 && y<0){
        printf("Quardrant: III(-,-)");
    }else if(x>0 && y<0){
        printf("Quardrant: IV(+,-)");
    }
    return 0;
}
```

Output:



Problem No: 2302056_38

Problem name: Write a program that reads two numbers and divides the first number by the second number. If division is not possible print "Division is not possible".

Input:

```c
#include<stdio.h>

int main()
{
    float a,b;
    printf("Enter the first number: ");
    scanf("%f",&a);
    printf("Enter the second number: ");
    scanf("%f",&b);
    if(b==0){
        printf("Division not possible");
    } else{
        printf("The divider is:%f",a/b);
    }
    return 0;
}
```

Output:

```
Enter the first number: 5
Enter the second number: 3
The divider is:1.666667
```

Problem No: 2302056_39

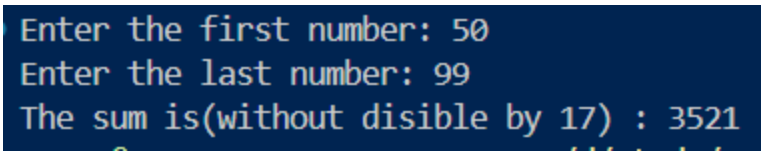
Problem Name: Write a C program to calculate the sum of all numbers not divisible by 17 between two given integer numbers.

Input:

```c
#include<stdio.h>

int main()
{
    int a,b;
    int sum = 0;
    printf("Enter the first number: ");
    scanf("%d",&a);
    printf("Enter the last number: ");
    scanf("%d",&b);
    for(int i=a; i<=b; i++){
        if(i%17!=0){
            sum += i;
        }
    }
    printf("The sum is(without disible by 17) : %d",sum);
    return 0;
}
```

Output:



Problem No: 2302056_40

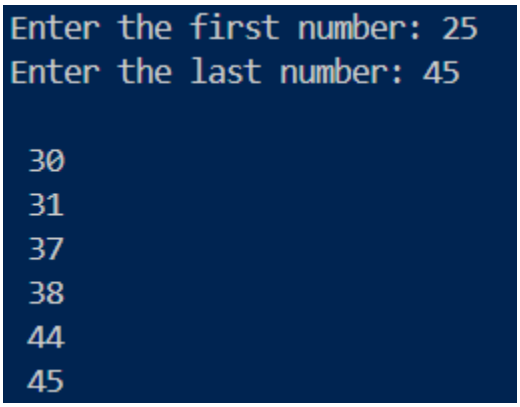
Problem Name: Write a C program that finds all integer numbers that divide by 7 and have a remainder of 2 or 3 between two given integers.

Input:

```c
#include<stdio.h>

int main()
{
    int a,b;
    printf("Enter the first number: ");
    scanf("%d",&a);
    printf("Enter the last number: ");
    scanf("%d",&b);
    for(int i=a; i<=b; i++){
        if(i%7==2 || i%7==3){
            printf("\n %d",i);
        }
    }
    return 0;
}
```

Output:



Problem No: 2302056_41

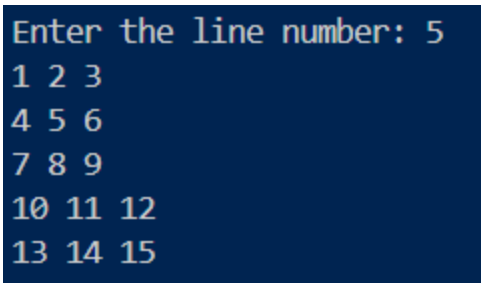
Problem Name: Write a C program to print 3 numbers on a line, starting with 1 and printing n lines. Accept the number of lines (n, integer) from the user.

Input:

```c
#include<stdio.h>

int main()
{
    int n;
    int a = 1;
    printf("Enter the line number: ");
    scanf("%d",&n);
    for(int i=1; i<=n; i++){
        for(int j=1; j<=3; j++){
            printf("%d ",a);
            a++;
        }
        printf("\n");
    }
    return 0;
}
```

Output:



Problem No: 2302056_42

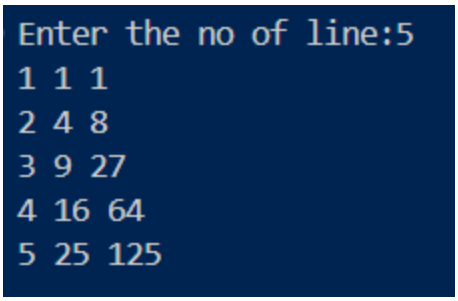
Problem Name: Write a C program to print a number, its square and cube, starting with 1 and printing n lines. Accept the number of lines (n, integer) from the user.

Input:

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

int main()
{
    int n;
    printf("Enter the no of line:");
    scanf("%d",&n);
    for(int i=1; i<=n; i++){
        for(int j=1; j<=3; j++){
            int power = pow(i,j);
            printf("%d ",power);
        }
        printf("\n");
    }
    return 0;
}
```

Output:



Problem No: 2302056_43

Problem Name: Write a C program that reads two integers p and q, prints p number of lines in a sequence of 1 to b in a line.

Input:

```c
#include<stdio.h>

int main()
{
    int p,q;
    int a=1;
    printf("Input number of line: ");
    scanf("%d",&p);
    printf("Numbers of character in a line: ");
    scanf("%d",&q);
    for(int i=1; i<=p; i++){
        for(int j=1; j<=q; j++){
            printf("%d ",a);
            a++;
        }
        printf("\n");
    }
    return 0;
}
```

Output:

```
Input number of line: 5
Numbers of character in a line: 6
1 2 3 4 5 6
7 8 9 10 11 12
13 14 15 16 17 18
19 20 21 22 23 24
25 26 27 28 29 30
```

Problem No: 2302056_44

Problem Name: Write a C program to calculate the average mathematics marks of some students. Input 0 (excluding to calculate the average) or a negative value to terminate the input process.

Input:

```c
#include<stdio.h>

int main()
{
    int n;
    float avrg;
    int sum = 0;
    int persons = 0;
    printf("Input persons number: ");
    scanf("%d",&n);
    int marks[100];
    printf("Marks are(0 to terminat): \n");
    for(int i=1; i<=n; i++){
        scanf("%d",&marks[i]);
            if(marks[i]<=0){
            break;
        }
        persons++;
        sum +=marks[i];
    }
```

```c
    avrg = (float)sum/(float)persons;
    printf("Average: %f",avrg);
    return 0;
}
```

Output:

```
Input persons number: 5
Marks are(0 to terminat):
10
15
20
25
0
Average: 17.500000
```

Problem No: 2302056_45

Problem Name: Write a C program to calculate the value of S where S = 1 + 1/2 + 1/3 + ... + 1/50.

Input:

```c
#include<stdio.h>

int main()
{
    float s = 1;
    for(float i=2; i<=50; i++){
        s = s+ (1/i);
    }
    printf("s = %f",s);
    return 0;
}
```

Output:

```
s = 4.499206
```

Problem No: 2302056_46

Problem Name: Write a C program to calculate the value of S where S = 1 + 3/2 + 5/4 + 7/8.

Input:

```c
#include<stdio.h>

int main()
{
    float s = 0;
    float a = 1;
    for(float i=1; i<=7; i+=2){
        s = s+ (i/a);
        a*=2;
    }
    printf("s = %.2f",s);
    return 0;
}
```

Output:

```
s = 4.63
```

Problem No: 2302056_47

Problem Name: Write a C program that finds all the divisors of an integer.

Input:

```c
#include<stdio.h>

int main()
{
    int n;
    printf("Enter the number: ");
    scanf("%d",&n);
    for(int i=1; i<=n; i++){
        if(n%i==0){
            printf("%d\n",i);
        }
    }
    return 0;
}
```

Output:

```
Enter the number: 45
1
3
5
9
15
45
```

Problem No: 2302056_48

Problem Name: Write a C program that reads and prints the elements of an array of length 7. Before printing, replace every negative number, zero, with 100.

Input:

```c
#include<stdio.h>

int main()
{
    int arr[7];
    printf("Enter the value: \n");
    for(int i=0; i<7; i++){
        scanf("%d",&arr[i]);
    }
    for(int i=0; i<7; i++){
        if(arr[i]>0){
            printf("n[%d] = %d\n",i,arr[i]);
        } else{
            printf("n[%d] = 100\n",i);
        }
    }
    return 0;
}
```

Output:

```
Enter the value:
25
45
35
0
65
-15
80
n[0] = 25
n[1] = 45
n[2] = 35
n[3] = 100
n[4] = 65
n[5] = 100
n[6] = 80
```

Problem No: 2302056_49

Problem Name: Write a C program to read and print the elements of an array with length 7. Before printing, insert the triple of the previous position, starting from the second position.
For example, if the first number is 2, the array numbers must be 2, 6, 18, 54 and 162

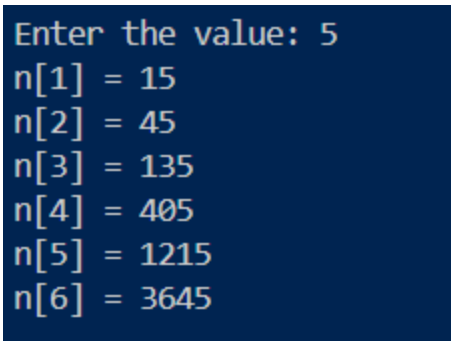
Input:

```c
#include<stdio.h>

int main()
{
    int arr[7];
    int n;
    printf("Enter the value: ");
    scanf("%d",&n);

    for(int i=0; i<7; i++){
        arr[i] = n;
        n *= 3;
    }
    for(int i=1; i<7; i++){
        printf("n[%d] = %d\n",i,arr[i]);
    }
    return 0;
}
```

Output:



Problem No: 2302056_50

Problem Name: Write a C program to read an array of length 5 and print the position and value of the array elements of value less than 5.

Input:

```c
#include<stdio.h>

int main()
{
    float arr[5];
    printf("Enter the value: \n");
    for(int i=0; i<5; i++){
        scanf("%f",&arr[i]);
    }
    for(int i=0; i<5; i++){
        if(arr[i]<5){
            printf("a[%d] = %.2f\n",i,arr[i]);
        }
    }
    return 0;
}
```

Output:

```
Enter the value:
15
25
4
35
40
a[2] = 4.00
```