

Absolute Beginner

26. Write a code to get 2 integers as input and find the HCF of the 2 integer without using recursion or Euclidean algorithm.

Input Description:

A single line containing 2 integers separated by space.

Output Description:

Print the HCF of the integers.

Sample Input :

2 3

Sample Output :

1

Sol:

```
let input = userInput[0].split(" ");
```

```
let a = input[0];
```

```
let b = input[1];
```

```
let min = (a<b) ? a : b;
```

```
let hcf;
```

```
for(var i=1;i<=min;i++)
```

```
{
```

```
    if(a%i ==0 && b%i==0)
```

```
    {
```

```
        hcf = i;
```

```
    }
```

```
}
```

```
console.log(hcf);
```

2.

30. The area of an equilateral triangle is $\frac{1}{4}(\sqrt{3}a^2)$ where "a" represents a side of the triangle. You are provided with the side "a". Find the area of the equilateral triangle.

Input Description:

The side of an equilateral triangle is provided as the input.

Output Description:

Find the area of the equilateral triangle and print the answer up to 2 decimal places after rounding off.

Sample Input :

20

Sample Output :

173.21

Sol:

```
let r = parseFloat(userInput[0]);  
let area = ((0.25)*(3**(0.5))*(r*r))  
console.log(area.toFixed(2))
```

29.

Write a code to get an integer N and print the values from N to 1.

Input Description:

A single line contains an integer N.

Output Description:

Print the values from N to 1 in a separate line.

Sample Input :

10

Sample Output :

10
9
8
7
6
5
4
3
2
1

Sol:

```
let r = parseInt(userInput[0]);
for(var i=r;i>=1;i--)
{
    console.log(i);
}
```

28.

You are given the coefficients of a quadratic equation in order A, B & C.

Where A is the coefficient of X^2 , B is the coefficient of X and C is the constant term in the most simplified form.

Example: For $X^2 + 5X + 6 = 0$, you are given the input as: 1 5 6.

Write a program to find all of the roots of the quadratic.

Note: The output should be up to 2nd decimal place (round off if needed) and in case of a recurring decimal use braces i.e. for eg: 0.33333..... => 0.33.

Note: Use Shri Dharacharya's Method to solve i.e. $X = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$ & $\frac{-b - \sqrt{b^2 - 4ac}}{2a}$

Input Description:

Three numbers corresponding to the coefficients of x(squared), x and constant are given as an input in that particular order

Output Description:

Print the two values of X after rounding off to 2 decimal places if required.

Sol:

```
let arr = userInput[0].split(" ");
let a = parseFloat(arr[0]);
let b = parseFloat(arr[1]);
let c = parseFloat(arr[2]);
let one;
let two;
one = (-b+((b*b)-(4*a*c))**(0.5))/(2*a);
console.log(one.toFixed(2));
```

```
two = (-b-((b*b)-(4*a*c))**(0.5))/(2*a);
```

```
console.log(two.toFixed(2));
```

27.

Write a code to get an integer N and print the digits of the integer.

Input Description:

A single line contains an integer N.

Output Description:

Print the digits of the integer in a single line separated by space,

Sample Input :

348

Sample Output :

3 4 8

Sol:

```
let r=userInput[0];  
let string = ""  
for(var i=0;i<r.length;i++)  
{  
    string += (r[i]+" ");  
}  
console.log(string.trim());
```

25:

Write a code get an integer number as input and print the odd and even digits of the number separately.

Input Description:

A single line containing an integer.

Output Description:

Print the even and odd integers of the integer in a separate line.

Sample Input :

1234

Sample Output :

2 4

1 3

Sol:

```
let r = userInput[0].split("");
```

```
    r = r.sort();
```

```
    let even = "";
```

```
    let odd = "";
```

```
    for(var i=0;i<r.length;i++)
```

```
    {
```

```
        if(r[i] %2 ==0)
```

```
        {
```

```
            even += r[i]+" ";
```

```
        }
```

```
        else if (r[i] %2==1)
```

```
        {
```

```
            odd += r[i]+" ";
```

```
        }
```

```
    }
```

```
    console.log(even.trim())
```

```
    console.log(odd.trim())
```

24 :

Write a program to get a string as input and reverse the string without using temporary variable.

Input Description:

A single line containing a string.

Output Description:

Print the reversed string.

Sample Input :

GUVI

Sample Output :

IVUG

Sol:

```
let string = userInput[0];
let rev_string = ""
for(var i=(string.length-1); i>=0;i--)
{
    rev_string += string[i];
}
console.log(rev_string);
```

23:

Write a code to get an integer N and print the even values from 1 till N in a separate line.

Input Description:

A single line contains an integer N.

Output Description:

Print the even values from 1 to N in a separate line.

Sample Input :

6

Sample Output :

2

4

6

Sol:

```
let r = parseInt(userInput[0]);
for(var i=1;i<=r;i++){
    if(i%2==0)
    {
```

```
        console.log(i);
    }
}
```

22:

Write a code to get 2 integers A and N. Print the integer A, N times in separate line.

Input Description:

First line contains an integer A. Second line contains an Integer N.

Output Description:

Print the integer A, N times in a separate line.

Sample Input :

2 3

Sample Output :

2
2
2

Sol ;

```
    let r = userInput[0].split(" ")
    let a = parseInt(r[0]);
    let b = parseInt(r[1]);
    for(var i=1;i<=b;i++)
    {
        console.log(a);
    }
```

21:

Write a code to get an integer N and print the sum of values from 1 to N.

Input Description:

A single line contains an integer N.

Output Description:

Print the sum of values from 1 to N.

Sample Input :

10

Sample Output :

55

Sol:

```
let r = userInput[0];  
let sum = 0;  
for(var i=1;i<=r;i++)  
{  
    sum += i;  
}  
console.log(sum);
```

20:

Write a code to get the input and print it 5 times.

Input Description:

A single line contains an integer N.

Output Description:

Output contains 5 lines with each line having the value N.

Sample Input :

4

Sample Output :

4

4

4

4

4

Sol:

```
let r=userInput[0];  
for(var i=1;i<=5;i++)  
{  
    console.log(r);  
}
```

19:

You are given A = Length of a rectangle & B = breadth of a rectangle. Find its area “C”.

(A and B are natural numbers)

Input Description:

The inputs are two natural numbers representing the length and the breadth of a rectangle.

Output Description:

Find the area of the rectangle formed by the provided input. Round off the answer to the first decimal place if required.

Sample Input :

2

3

Sample Output :

6

Sol;

```
console.log(userInput[0]*userInput[1]);
```

18:

Write a code get an integer number as input and print the sum of the digits.

Input Description:

A single line containing an integer.

Output Description:

Print the sum of the digits of the integer.

Sample Input :

124

Sample Output :

7

Sol:

```
let r = parseInt(userInput[0]);
```

```
let sum=0;
```

```
let rem;
```

```
while(r>0)
```

```
{
```

```
    rem = r%10;

    sum += rem;

    r = Math.floor(r/10);
}

console.log(sum)
```

17.

You are provided with a number check whether its odd or even.

Print "Odd" or "Even" for the corresponding cases.

Note: In case of a decimal, Round off to nearest integer and then find the output. In case the input is zero, print "Zero".

Input Description:

A number is provided as the input.

Output Description:

Find out whether the number is odd or even. Print "Odd" or "Even" for the corresponding cases. Note: In case of a decimal, Round off to nearest integer and then find the output. In case the input is zero, print "Zero".

Sample Input :

2

Sample Output :

Even

Sol:

```
let r = parseInt(userInput[0]);
```

```
    if(r%2 == 0)
```

```
    {
```

```
        console.log("Even");
```

```
    }
```

```
    else if(r%2==1)
```

```
    {
```

```
        console.log("Odd");
```

```
    }
```

```
else
{
    console.log("Zero")
}
```

16,

Using the method of looping, write a program to print the table of 9 till N in the format as follows:
(N is input by the user)

9 18 27...

Print NULL if 0 is input

Input Description:

A positive integer is provided as an input.

Output Description:

Print the table of nine with single space between the elements till the number that is input.

Sample Input :

3

Sample Output :

9 18 27

Sol;

```
let r = userInput[0];
var string = "";
for(var i=1;i<=r;i++)
{
    string += (i*9)+" ";
}
console.log(string.trim())
```

15:

You are provided with a number "N", Find the Nth term of the series: *1, 4, 9, 16, 25, 36, 49, 64, 81,*

(Print "*Error*" if N = negative value and 0 if N = 0).

Input Description:

An integer N is provided to you as the input.

Output Description:

Find the Nth term in the provided series.

Sample Input :

18

Sample Output :

324

Sol:

```
let num = userInput[0];  
console.log(num*num);
```

14.

Write a code to get an integer N and print values from 1 till N in a separate line.

Input Description:

A single line contains an integer N.

Output Description:

Print the values from 1 to N in a separate line.

Sample Input :

5

Sample Output :

1

2

3

4

5

Sol:

```
let num = userInput[0];  
for(var i=1;i<=num;i++)
```

```
{  
    console.log(i)  
}
```

13.

Let "A" be a string. *Remove all the whitespaces and find it's length.*

Input Description:

A string is provide as an input

Output Description:

Remove all the whitespaces and then print the length of the remaining string.

Sample Input :

Lorem Ipsum

Sample Output :

10

Sol:

```
let r = userInput[0];  
let count =0;  
for (let i=0; i < r.length; i++)  
{  
    if(r[i] != " ")  
    {  
        count++;  
    }  
}  
console.log(count);
```

12;

You are given with **Principle amount(\$)**, **Interest Rate(%)** and **Time (years)** in that order.
Find *Simple Interest*.

Print the output up to two decimal places (Round-off if necessary).

$(S.I. = P * T * R / 100)$

Input Description:

Three values are given to you as the input. these values correspond to Principle amount, Interest Rate and Time in that particular order.

Output Description:

Find the Simple interest and print it up to two decimal places. Round off if required.

Sample Input :

1000 2 5

Sample Output :

100.00

Sol:

```
const input = userInput[0].split(" ");
```

```
let p = input[0];
```

```
let i = input[1];
```

```
let t = input[2];
```

```
let si = parseFloat((p*i*t)/100)
```

```
console.log(si.toFixed(2))
```

11.

You are given a number **A** in *Kilometers*. Convert this into **B**: *Meters* and **C**: *Centi-Metres*.

Input Description:

A number "A" representing some distance in kilometer is provided to you as the input.

Output Description:

Convert and print this value in meters and centimeters.

Sample Input :

2

Sample Output :

2000

200000

Sol:

```
console.log(userInput[0]*1000);  
console.log(userInput[0]*100000);
```

10.

Let "A" be a year, write a program to check whether this year is a leap year or not.

Print "Y" if its a leap year and "N" if its a common year.

Input Description:

A Year is the input in the form of a positive integer.

Output Description:

Print "Y" if its a leap year and "N" if its a common year.

Sample Input :

2020

Sample Output :

Y

Sol:

```
if((userInput[0]%4 == 0) || (userInput[0]%100 == 0))
```

```
{
```

```
    console.log("Y");
```

```
}
```

```
else{
```

```
    console.log("N");
```

```
}
```

9:

You are provided with the radius of a circle "A". Find the length of its circumference.

Note: In case the output is coming in decimal, roundoff to 2nd decimal place. In case the input is a negative number, print "Error".

Input Description:

The Radius of a circle is provided as the input of the program.

Output Description:

Calculate and print the Circumference of the circle corresponding to the input radius up to two decimal places.

Sample Input :

2

Sample Output :

12.57

Sol:

```
let circum = 2*(22/7)*userInput[0];  
console.log(circum.toFixed(2))
```

8:

You will be provided with a number. Print the number of days in the month corresponding to that number.

Note: In case the input is February, print 28 days. If the Input is not in valid range print "Error".

Input Description:

The input is in the form of a number.

Output Description:

Find the days in the month corresponding to the input number. Print Error if the input is not in a valid range.

Sample Input :

8

Sample Output :

31

Sol:

```
let num = parseInt(userInput[0]);  
if((num == 1) || (num == 3) || (num==5) || (num==7) || (num ==8) || (num==10) || (num  
==12))  
{  
    console.log(31);  
}  
else if( (num==4) || (num==6) || (num==9) || (num==11))
```



```
{  
    console.log(30);  
}  
else if(num==2)  
{  
    console.log(28);  
}  
else{  
    console.log("Error");  
}
```

7.

You are given with a number "N", find its cube.

Input Description:

A positive integer is provided.

Output Description:

Find the cube of the number.

Sample Input :

2

Sample Output :

8

Sol;

```
console.log(userInput[0]*userInput[0]*userInput[0]);
```

6,

You are provided with two numbers. Find and print the smaller number.

Input Description:

You are provided with two numbers as input.

Output Description:

Print the small number out of the two numbers.

Sample Input :

23 1

Sample Output :

1

Sol:

```
const inp = userInput[0].split(" ");
```

```
let a = inp[0];
```

```
let b = inp[1];
```

```
console.log((a<b)?a:b)
```

5.

You are given three numbers **A**, **B** & **C**. Print the largest amongst these three numbers.

Input Description:

Three numbers are provided to you.

Output Description:

Find and print the largest among the three

Sample Input :

1

2

3

Sample Output :

3

Sol:

```
let a = parseInt(userInput[0]);
```

```
let b = parseInt(userInput[1]);
```

```
let c = parseInt(userInput[2]);
```

```
if(a>b && a>c)
```

```
{
```

```
    console.log(a);
```

```
}
```

```
else if(b>a && b>c)
```

```
{
```

```
    console.log(b);  
  }  
  else{  
    console.log(c);  
  }
```

4:

You are given Two Numbers, A and B. If $C = A + B$. Find C.

Note: Round off the output to a single decimal place.

Input Description:

You are provided with two numbers A and B.

Output Description:

Find the sum of the two numbers (A + B)

Sample Input :

1
1

Sample Output :

2

Sol

```
let a=parseInt(userInput[0]);  
    let b=parseInt(userInput[1]);  
    console.log(a+b)
```

3.

You are provided with a number, "N". Find its factorial.

Input Description:

A positive integer is provided as an input.

Output Description:

Print the factorial of the integer.

Sample Input :

2

Sample Output :

2

Sol:

```
var fact=1;

let friend = parseInt(userInput[0]);

for(let i=1; i<=friend; i++)

{

    fact = fact*i;

}

console.log(fact);
```

2.

Print the First 3 multiples of the given number "N". (N is a positive integer)

Note: print the characters with a single space between them.

Input Description:

A positive integer is provided to you as an input.

Output Description:

Print the First 3 multiples of the number with single spaces between them as an output.

Sample Input :

2

Sample Output :

2 4 6

Sol:

```
number = parseInt(userInput[0]);

console.log((number*1)+" "+(number*2)+" "+(number*3))
```

1.

You are given with a number A i.e. the temperature in Celcius. Write a program to convert this into Fahrenheit.

*Note: In case of decimal values, round-off to **two** decimal places.*

Input Description:

A number is provided in Celcius as the input of the program.

Output Description:

The output shall be the temperature converted into Fahrenheit corresponding to the input value print up to two decimal places and round off if required.

Sample Input :

12

Sample Output :

53.60

Sol:

```
let res = parseFloat(userInput[0])
```

```
console.log((parseFloat(userInput[0])*(9/5)+32).toFixed(2));
```