**Harshad number 22**

public class HarshadNumber {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

int num = s.nextInt();

int temp = num;

int sum = 0;

int rem = 0;

while(num != 0){

rem = num % 10;

sum += rem;

num /= 10;

}

if(temp%sum==0){

System.out.println("Harshad Number");

}else{

System.out.println("Not Harshad Number");

}

}

}

**Abundant number 11**

import java.util.Scanner;

public class AbundantNumber {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int num = sc.nextInt();

int sum = 0;

// Find sum of proper divisors

for (int i = 1; i <= num / 2; i++) {

if (num % i == 0) {

sum += i;

}

}

// Check condition

if (sum > num) {

System.out.println("Abundant Number");

} else {

System.out.println("Not Abundant Number");

}

sc.close();

}

}

**Sum Of Digit 10**

import java.util.Scanner;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

sc.close();

// Check for the "Invalid Input" condition

if (n < 100) {

System.out.println("Invalid Input");

return; }

int sum = 0;

int originalNumber = n;

// Calculate the sum of the digits

while (n > 0) {

int digit = n % 10;

sum += digit;

n /= 10;

}

System.out.println("Sum of digit is " + sum);

}

}

**Fibonacci series 144**

import java.util.Scanner;

public class Solution {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int n = scanner.nextInt();

int m = scanner.nextInt();

scanner.close();

// Check if the inputs are within the valid range

if (n < 1 || n > 20 || m < 1 || m > 20 || n > m) {

System.out.println("Invalid Input");

return;

}

// Initialize variables for the Fibonacci sequence

int a = 0;

int b = 1;

int nextFib;

double sum = 0.0;

int count = 1;

// Generate the Fibonacci sequence and calculate the sum

while (count <= m) {

if (count >= n) {

sum += a;

}

nextFib = a + b;

a = b;

b = nextFib;

count++;

}

System.out.println("The Sum of Fibonacci value is " + sum);

}

}

**Multiplication table 79**

import java.util.Scanner;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

if (n < 1 || n > 9) {

System.out.println("Invalid Input");

} else {

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

System.out.println(n + " x " + i + " = " + (n \* i));

}

}

}

}

**Sum of even number 1**

import java.util.Scanner;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

int m = sc.nextInt();

sc.close();

// Check for the "Invalid Input" condition

if (n <= 0 || m <= 0 || n >= 30 || m >= 30 || n >= m) {

System.out.println("Invalid Input");

return;

}

int sum = 0;

// Loop through the range from n to m

for (int i = n; i <= m; i++) {

// Check if the current number is even

if (i % 2 == 0) {

sum += i;

}

}

System.out.println(sum);

}

}

**Armstrong number or not 13**

import java.util.Scanner;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

// Check if n is a 3-digit number

if (n < 100 || n > 999) {

System.out.println("No");

} else {

int temp = n;

int sum = 0;

while (temp > 0) {

int digit = temp % 10;

sum += digit \* digit \* digit; // cube of digit

temp /= 10;

}

if (sum == n) {

System.out.println("Yes");

} else {

System.out.println("No");

}

}

}

}

**swap 2 digit number**

import java.util.Scanner;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

String s = sc.next().trim();

if (s.length() == 1) {

// single digit

System.out.println("STDOUT");

} else if (s.length() == 2) {

// exactly two digits: swap them

System.out.println("" + s.charAt(1) + s.charAt(0));

} else {

// more than two digits: take first two digits and swap them

System.out.println("" + s.charAt(1) + s.charAt(0));

}

}

}

**Reverse a Number Using Loop 1**

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

long n = sc.nextLong();

// Constraint check

if (n <= 0 || n > 1000000000) {

System.out.println("Invalid Input");

return;

}

long reversed = 0;

while (n > 0) {

long digit = n % 10;

reversed = reversed \* 10 + digit;

n = n / 10;

}

System.out.println(reversed);

}

}

**Collatz Sequence 7**

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter a number");

int n = sc.nextInt();

int count = 0;

System.out.println(n); // print the starting number

while (n != 1) {

if (n % 2 == 0) {

n = n / 2;

} else {

n = 3 \* n + 1;

}

System.out.println(n);

count++;

}

System.out.println("count:" + count);

}

}

**Count Digits in an Integer 1**

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

long num = sc.nextLong();

// Check constraints

if (num < 1 || num > 10000000) {

System.out.println("Enter a Valid Input");

return;

}

int count = 0;

long temp = num;

while (temp > 0) {

temp = temp / 10;

count++;

}

System.out.println("The count of the given integer is: " + count);

}

}

**Print a pattern 4**

import java.util.Scanner;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

if (n < 0 || n > 9) {

System.out.println("Invalid Input");

return;

}

char ch = 'A';

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

for (int j = 1; j <= i; j++) {

System.out.print(ch + " ");

ch++;

}

System.out.println();

}

}

}