1. **Multiplication Table**

print("Enter n")

n = int(input())

print("Enter m")

m = int(input())

print("The multiplication table of", n, "is")

for i in range(1, m+1):

print(i, "\*", n, "=", n\*i, sep="")

1. **Print Prime Numbers in a Range**

n = int(input())

for i in range(2, n+1):

prime = 1

for j in range(2, int(i/2)+1):

if i % j == 0:

prime = 0

break

if prime == 1:

print(i, end=" ")

1. **Special Number**

m = int(input())

n = int(input())

for i in range(m, n+1):

if i <= 99:

sum = i % 10 + i // 10

prod = (i % 10) \* (i // 10)

if sum + prod == i:

print(i)

1. **Amoeba Multiplication**

n = int(input())

a, b = 0, 1

for i in range(2, n):

c = a + b

a = b

b = c

print(c)

1. **Number Series**

n = int(input())

for i in range(1, n + 1):

if i % 2 == 0:

print((i \* i) - 2, end=' ')

else:

print((i \* i) - 1, end=' ')

1. **Hollow Square Pattern**

n = int(input())

for i in range(1, n + 1):

for j in range(1, n + 1):

if i == 1 or i == n or j == 1 or j == n:

print("\*", end='')

else:

print(" ", end='')

print("")

1. **Treasure Finder**

a = int(input())

b = int(input())

c = int(input())

if a > b and a > c:

if b > c:

print("The treasure is in the box which has the number " + str(b))

else:

print("The treasure is in the box which has the number " + str(c))

elif b > a and b > c:

if a > c:

print("The treasure is in the box which has the number " + str(a))

else:

print("The treasure is in the box which has the number " + str(c))

else:

if a > b:

print("The treasure is in the box which has the number " + str(a))

else:

print("The treasure is in the box which has the number " + str(b))

min\_num = min(a, b, c)

hcf = 0

for i in range(min\_num, 0, -1):

if a % i == 0 and b % i == 0 and c % i == 0:

hcf = i

break

print("The code to open the box is " + str(hcf))

1. **Collatz Problem**

n = int(input())

count = 0

print(n)

while n != 1:

if n % 2 == 0:

n = n // 2

count += 1

else:

n = (3 \* n) + 1

count += 1

print(n)

print(count)

1. **Strong Number**

n = int(input())

temp = n

sum = 0

while n != 0:

rem = n % 10

fact = 1

for i in range(1, rem + 1):

fact \*= i

sum += fact

n //= 10

if sum == temp:

print("Yes")

else:

print("No")

1. **Inverted Right Angled Triangle**

rows = int(input())

for i in range(rows, 0, -1):

for j in range(1, i + 1):

print("\*", end="")

print("")

1. **Sum of Digits till single digit**

n = int(input())

sum = 0

while n > 0:

sum += n % 10

n //= 10

if n == 0 and sum > 9:

n = sum

sum = 0

print(sum)

(or)

n = int(input())

if n == 0:

print(0)

elif n % 9 == 0:

print(9)

else:

print(n % 9)

1. **Kaprekar Number**

import math

n = int(input().strip())

count = 0

temp = n

sq = n \* n

while n != 0:

r = n % 10

n //= 10

count += 1

p = 10 \*\* count

q = sq // p

rem = sq % p

sum = q + rem

if sum == temp:

print("Kaprekar Number")

else:

print("Not a Kaprekar Number")

1. **Trapezium Pattern**

n = int(input())

a = 1

b = n \* n + 1

for i in range(n, 0, -1):

for h in range(n-i):

print("--", end="")

for j in range(i):

print(a, end="\*")

a += 1

for k in range(i-1):

print(b, end="\*")

b += 1

print(b)

b = b - 2 \* (i - 1)