1. Write a Python program to check if the given number is a Disarium Number?

import math

def check(n) :

count\_digits = len(str(n))

sum1 = 0 # Initialize sum of terms

x = n

while x!=0:

r = x % 10

sum1 = sum1 + math.pow(r, count\_digits)

count\_digits = count\_digits - 1

x = x/10

if sum1 == n :

return 1

else :

return 0

n = 89

if check(n) == 1:

print("Disarium Number")

else :

print("Not a Disarium Number")

1. Write a Python program to print all disarium numbers between 1 to 100?

for i in range(1,100):

rem = sum1 = 0;

len1 = len(str(i));

n = i;

while(i > 0):

rem = i%10;

sum1 = sum1 + int(rem\*\*len1);

i = i//10;

len1 = len1 - 1;

if(sum1 == n):

print(str(n) + " is a disarium number");

else:

print(str(n) + " is not a disarium number");

1. Write a Python program to check if the given number is Happy Number?

def isHappyNumber(num):

rem = sum = 0;

while(num > 0):

rem = num%10;

sum = sum + (rem\*rem);

num = num//10;

return sum;

num = 20;

result = num;

while(result != 1 and result != 4):

result = isHappyNumber(result);

if(result == 1):

print(str(num) + " is a happy number");

elif(result == 4):

print(str(num) + " is not a happy number");

1. Write a Python program to print all happy numbers between 1 and 100?

def isHappyNumber(num):

rem = sum = 0;

while(num > 0):

rem = num%10;

sum = sum + (rem\*rem);

num = num//10;

return sum;

for i in range(1,101):

result = i

while(result != 1 and result != 4):

result = isHappyNumber(result);

if(result == 1):

print(str(i) + " is a happy number");

elif(result == 4):

print(str(i) + " is not a happy number");

1. Write a Python program to determine whether the given number is a Harshad Number?

def checkHarshad(n):

st = str(n)

sum = 0

length = len(st)

for i in st:

sum = sum + int(i)

if (n % sum == 0):

return "Yes"

else:

return "No"

1. Write a Python program to print all pronic numbers between 1 and 100?

def isPronicNumber(num):

flag = False;

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

if((j\*(j+1)) == num):

flag = True;

break;

return flag;

print("Pronic numbers between 1 and 100: ");

for i in range(1, 101):

if(isPronicNumber(i)):

print(i),

print(" "),