1. 已知年利率是0.0175，三年后，一万元本金，复利计算，最终可得？
2. 已知有一元二次方程，编写程序，求解一元二次方程的两个根。
3. 已知三角形的三边，就三角形的面积。

import math

side1 = 3

side2 = 4

side3 = 5

p = (side1 + side2 + side3) / 2

area = math.sqrt(p \* (p - side1) \*(p - side2) \* (p - side3))

print("area = ",area)

1. 随机投掷4次骰子，输出骰子得到的总点数。

import random

sum\_dice = 0

sum\_dice = sum\_dice + random.randrange(1, 7)

print("1st dice:",sum\_dice)

sum\_dice = sum\_dice + random.randrange(1, 7)

sum\_dice = sum\_dice + random.randrange(1, 7)

sum\_dice = sum\_dice + random.randrange(1, 7)

print("dice numbers:", sum\_dice)

1. 判断一元二次方程的两个跟是否存在，如果存在输出两个跟的值。

import math

a = input("a=")

b = input("b=")

c = input("c=")

if a == "1" :

print("x^2+"+b+"x+"+c+ "=0")

else:

print(a + "x^2+"+b+"x+"+c+ "=0")

a=int(a)

b=int(b)

c=int(c)

temp = b \*\* 2 - 4 \*a \* c

if temp >= 0 :

print("x1 = ",(-b + math.sqrt(temp)) / (2 \* a)," x2 = ", (-b - math.sqrt(temp)) / (2 \* a))

else:

print("No solution")

1. 从键盘接收一个数字，数字的范围是（0-3），0执行一个操作，1，2，3分别执行一个操作。

number = input("this number is (0 - 3)")

if number == "0":

print("exit")

elif number == "1":

print("Please add student's name:")

name = input("the student's name:")

print(name)

elif number == "2":

print("delete this student's name")

else:

print("Thank for you message!")

投掷一百次骰子，计算得到1点的次数。

import random

number = 0

i = 0

while i <= 600000 :

dice\_number = random.randrange(1, 7)

if dice\_number == 1:

number += 1

i = i + 1

print(number)

求和： s = 1/1 -1/2 + 2/3 - …… +(-1) ^(n+1)\*1/n 直到最后一位的精度小于等于1e-5

total=0

i=1

while 1 / i >= 1e-5 :

total = total + (-1) \*\* (i + 1) \*(1 / i)

i = i + 1

print(total)

输入一个数字，判断其是不是素数。

number = int(input())

i = 2

while i < number :

if number % i == 0:

break

i = i + 1

if i == number:

print("{} is prime".format(number))

else:

print("{}is not a prime".format(number))

输入一个n求和。

牛顿迭代法求平方根

EPSILON = 1e-15

c = float(input())

t = c

while abs(t - c / t) > EPSILON \* t :

t = (c / t + t ) / 2.0

print(t)

求十进制整数对应的二进制数

n = int(input())

v = 1

while v <= n // 2:

v = v \* 2

while v > 0:

if n < v:

print(0,end = "")

else:

print(1, end = "")

n -= v

v //= 2

print()

模拟赌徒的破产命运。

import random

stake = int(input()) #初始资金

goal = int(input()) #离场目标

trials = int(input()) #模拟次数

bets = 0 #下注次数

wins = 0 #赢的局数

for t in range(trials):

cash = stake

while(cash > 0) and (cash < goal):

bets += 1

if random.randrange(0, 2) == 0:

cash += 1

else:

cash -= 1

if cash == goal:

wins += 1

print(wins, bets)

因子分解

n = int(input())

factor = 2

while factor \* factor <= n:

while (n % factor) == 0:

n //= factor

print(str(factor)+ "\*",end = "")

factor += 1

if n > 1:

print(n)

print()