# Python Program for Maximum height when coins are arranged in a triangle

# Input : N = 7

# Output : 3

# Maximum height will be 3, putting 1, 2 and then 3 coins. It is not possible to use 1 coin left.

# Input : N = 12

# Output : 4

# Maximum height will be 4, putting 1, 2, 3 and coins, it is not possible to make height as 5,

# because that will require 15 coins

def sq\_root(val):

    num = val

    m = 1

    e = 0.000001

    while num - m > e:

        num = (num + m) / 2

        m = val / num

    return num

def find\_max\_height(number):

    val = 1 + 8 \* number

    max\_height = int((-1 + sq\_root(val)) / 2)

    return max\_height

if \_\_name\_\_ == "\_\_main\_\_":

    print("The maximum height of triangle is:", find\_max\_height(7))

    print("The maximum height of triangle is:", find\_max\_height(12))

OUTPUT

