"""

Simple heron code.

Source: https://stackoverflow.com/a/16619348

"""

import argparse

def heron(n, error):

prev, new = 1.0, 0.5 \* (1 + n)

while abs(new - prev) > error:

prev, new = new, 0.5 \* (new + n/new)

return new

def main():

parser = argparse.ArgumentParser(description="Use the heron method to calculate a square number.")

parser.add\_argument("n", type=float, help="number to get sqrt for.")

parser.add\_argument("e", type=float, nargs="?", default=1e-6, help="error tolerance")

ns = parser.parse\_args()

print(heron(ns.n, ns.e))

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

main()