Jaypee University of Engineering and Technology, Guna

[Lab-I]

18B17CI373 – Advanced Programming

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Enroll No. : 201B172

A. Execute following and evaluate the answer.

a. >>>Age = 20

b. >>>Pi = 3.14

c. >>>Name = ‘Amit’

d. >>>Laptop@ = 1000000

e. >>>sirname = Sharma

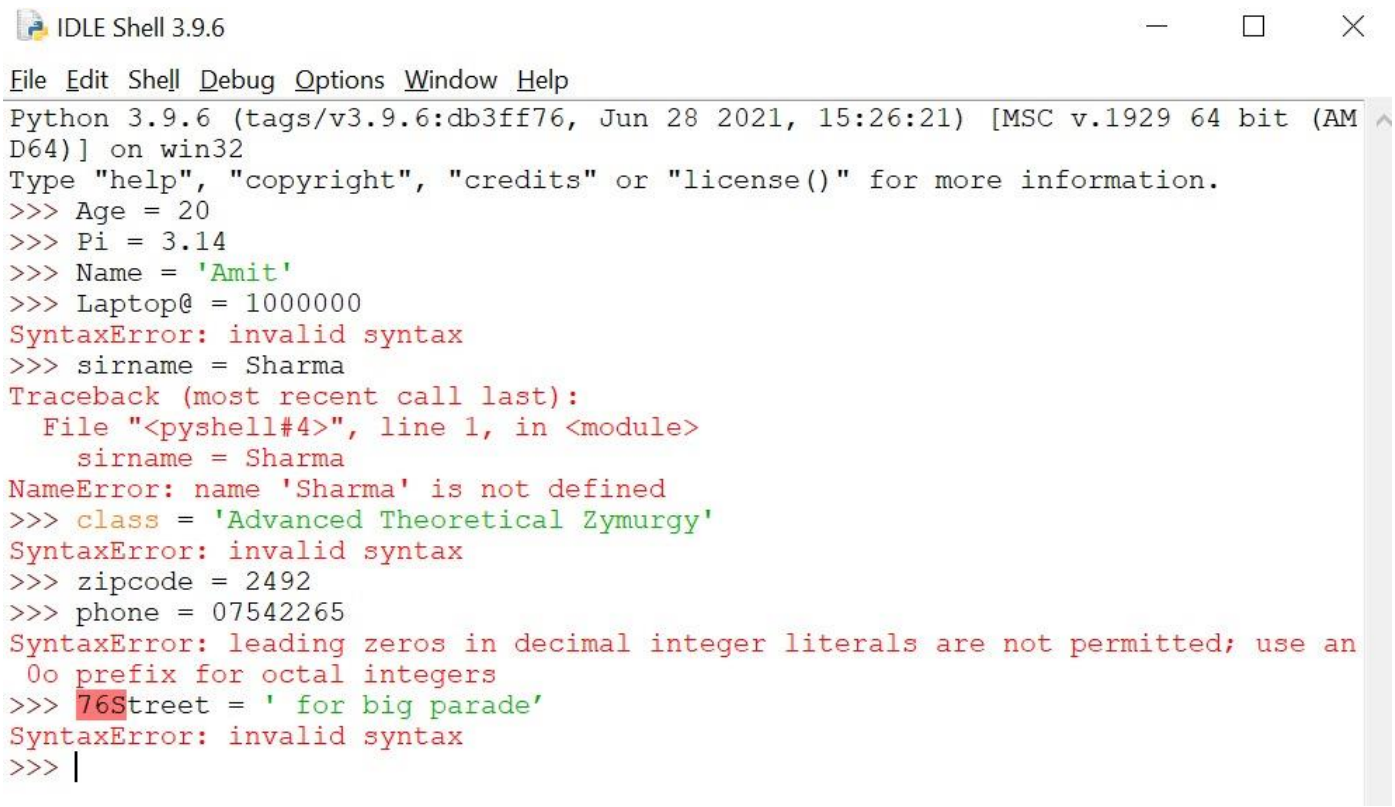
f. >>>class = 'Advanced Theoretical Zymurgy'

g. >>>zipcode = 2492

h. >>>phone = 07542265

i. >>>76Street = ' for big parade’

Solution-Output:



B. Evaluate following expressions.

a. >>>minute = 59

b. >>>minute/60

c. >>>17

d. >>>x

e. >>>x + 17

f. >>>miles = 26.2

g. >>>print miles * 1.61

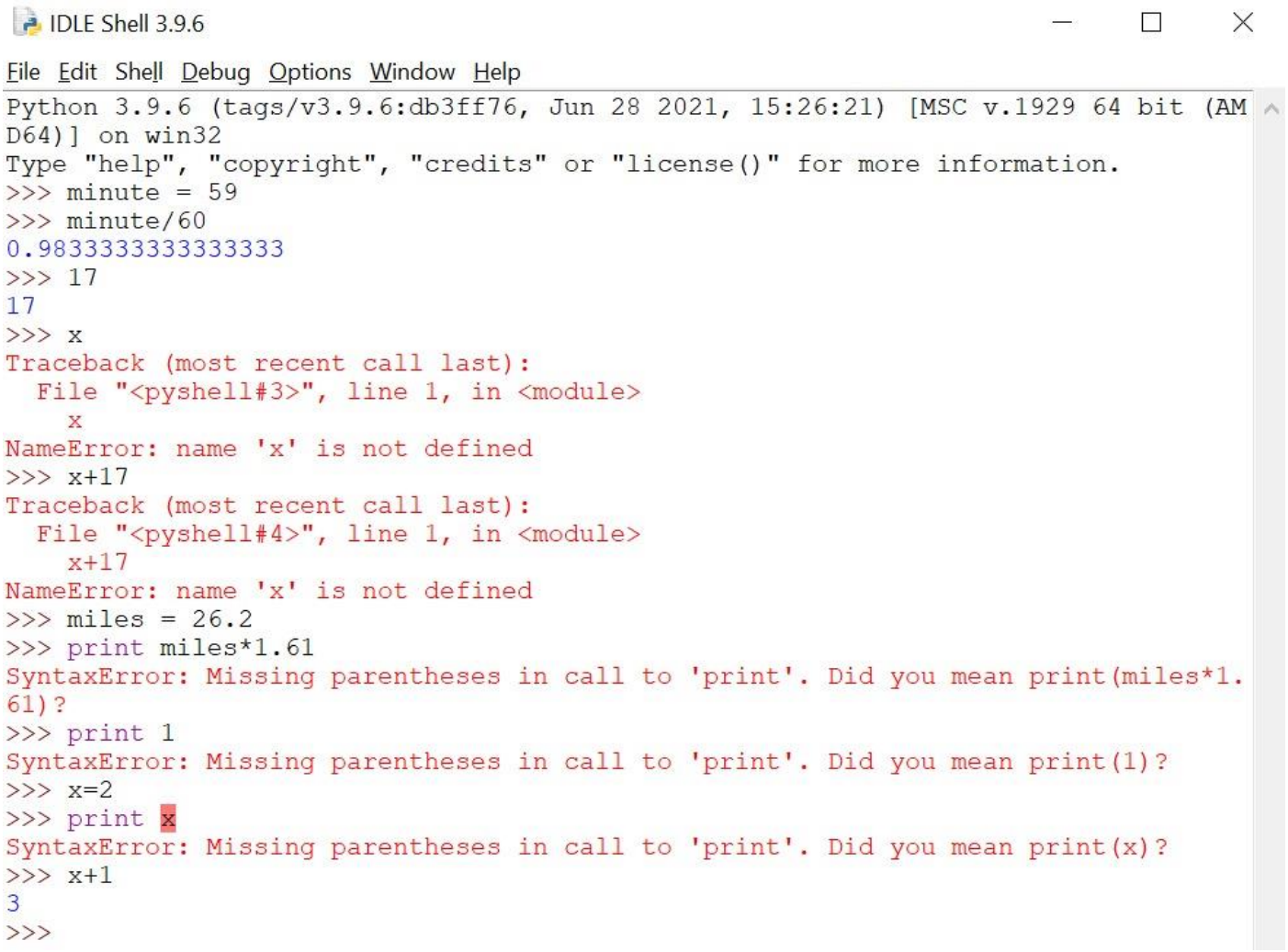
h. >>>print 1

i. >>>x = 2

j. >>>print x

k. >>>x + 1

Solution-Output:



C. Assume that we execute the following assignment statements:

width = 17

height = 12.0

delimiter = '.'

For each of the following expressions, write the value of the expression and the type (of the value

of the expression).

a. width/2

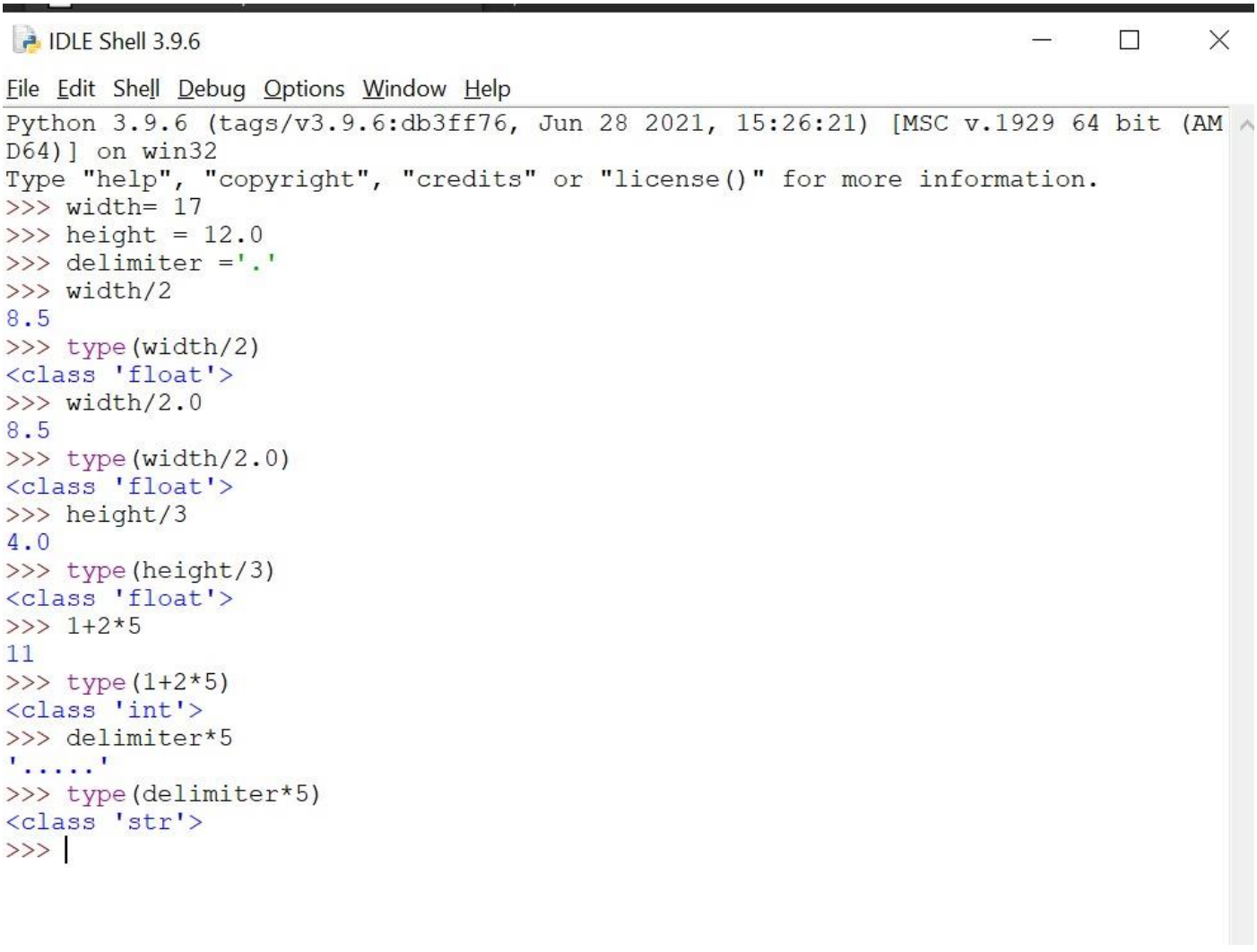
b. width/2.0

c. height/3

d. 1 + 2 * 5

e. delimiter * 5

Solution:



D. Verify the priorities and rules of precedence for operators.

Solution:

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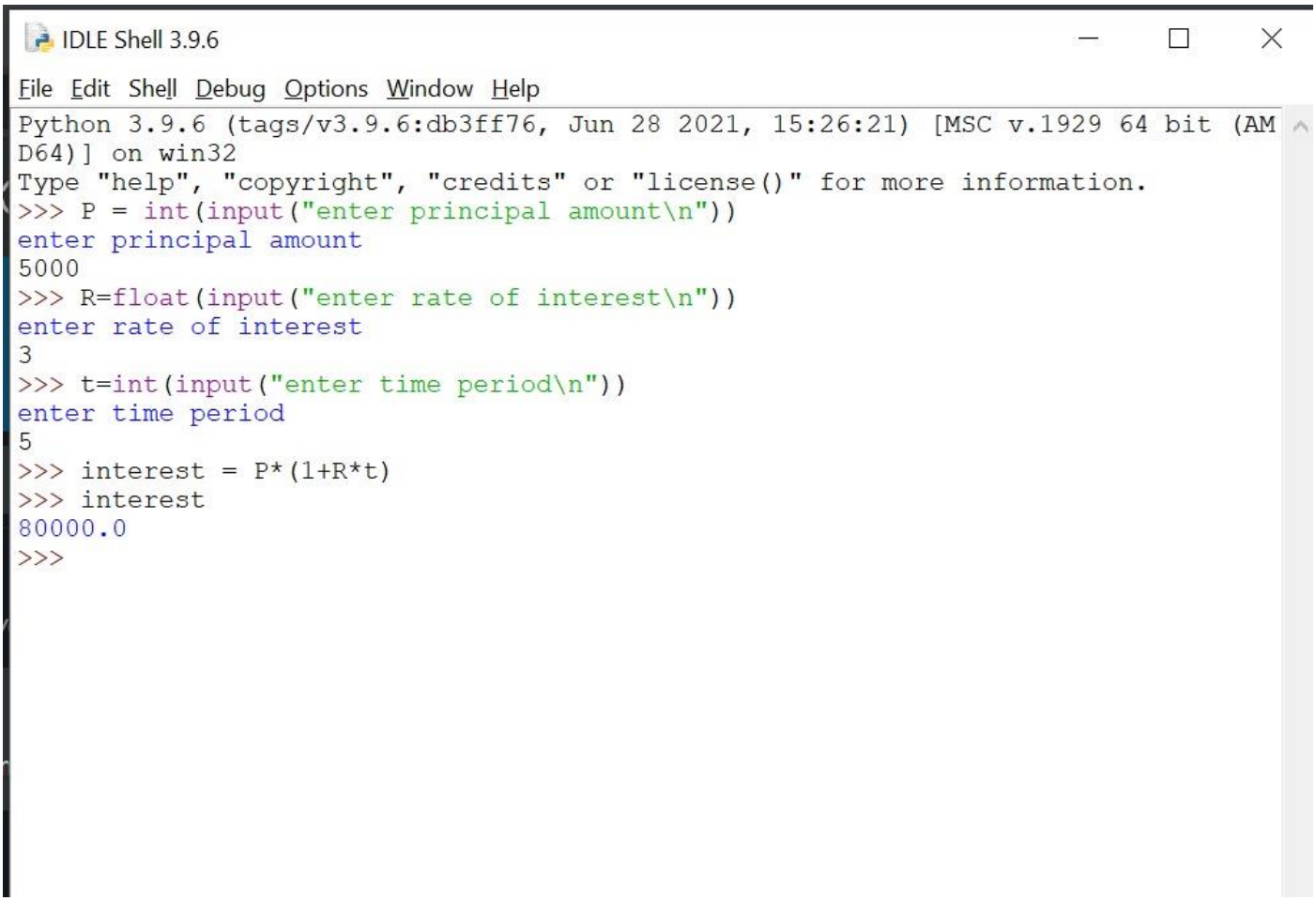
(D)

Operator	Description
**	Exponentiation
~ + -	Complement, unary plus and minus.
* / % //	Multiply, divide, modulo and floor division.
+ -	Addition and Subtraction
>> <<	Right and left bitwise shift
&	Bitwise 'And'
^ |	Bitwise exclusive 'OR' and regular 'OR'
<= < > >=	Comparison operators.
<> == !=	Equality operators.
= %= /= //= -= += *= **=	Assignment operators.
is is not	Identity operators.
in not in	Membership operators
not or and	Logical operators

E. Calculate simple interest on shell.

Note: Request your Teacher to demonstrate python program execution from a file, taking input from user at run time. Write rest of the programs on the same pattern.

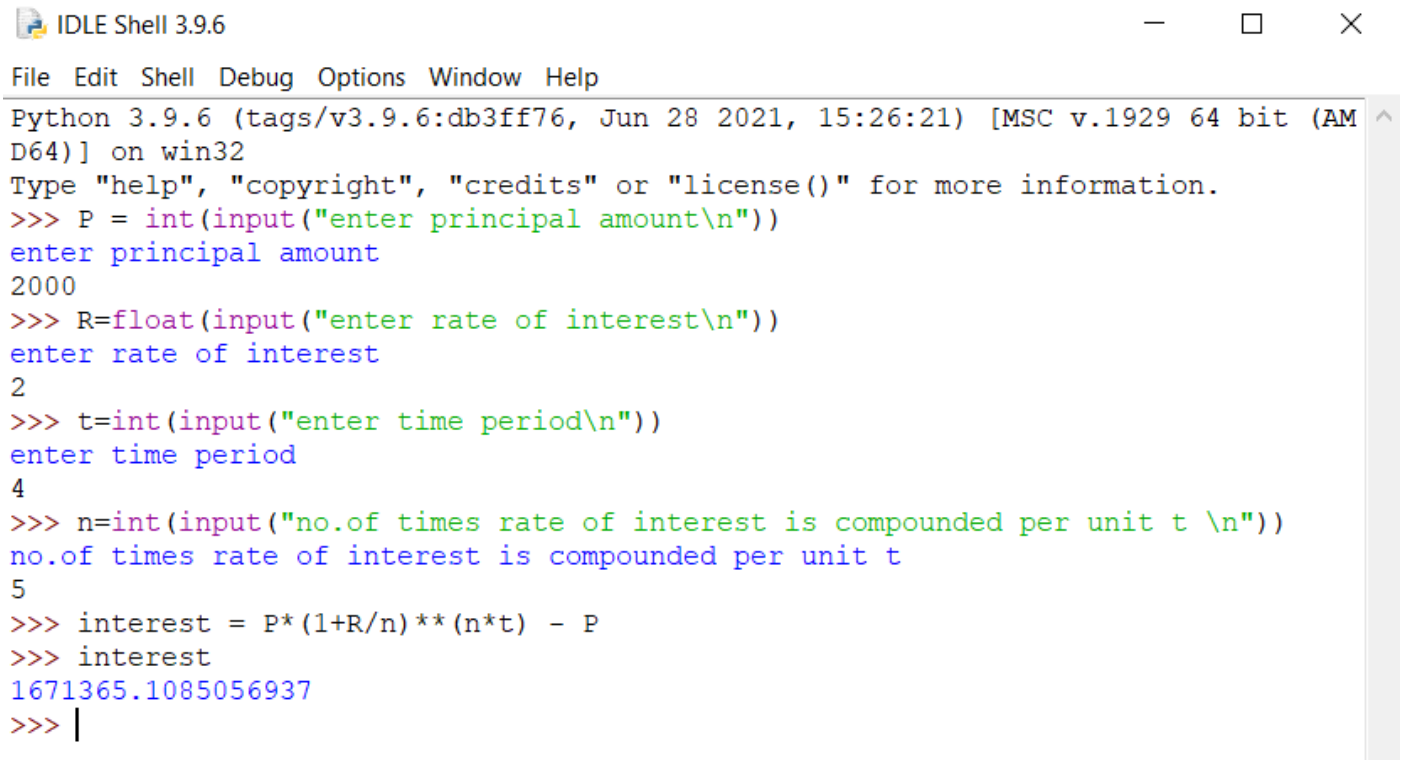
Solution:



F. Calculate compound interest.

Compound Interest=P(1+r/n)^nt−P

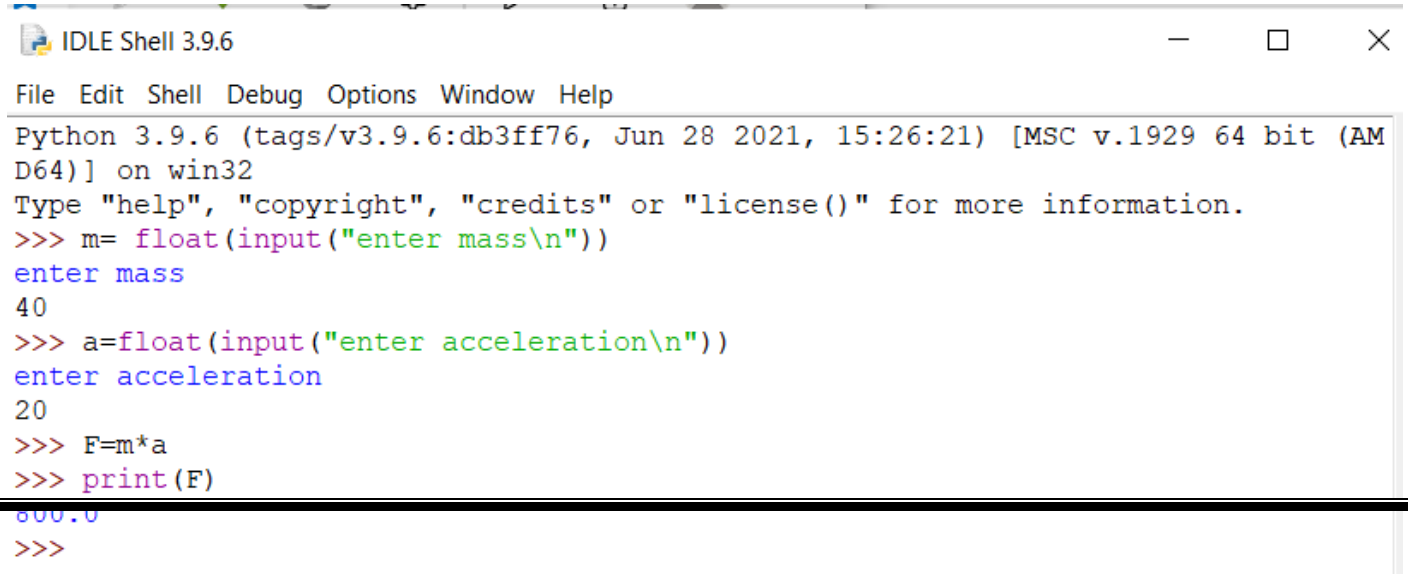
Solution:



G. Find the value of force when mass of a body and its acceleration is given.

F = m * a

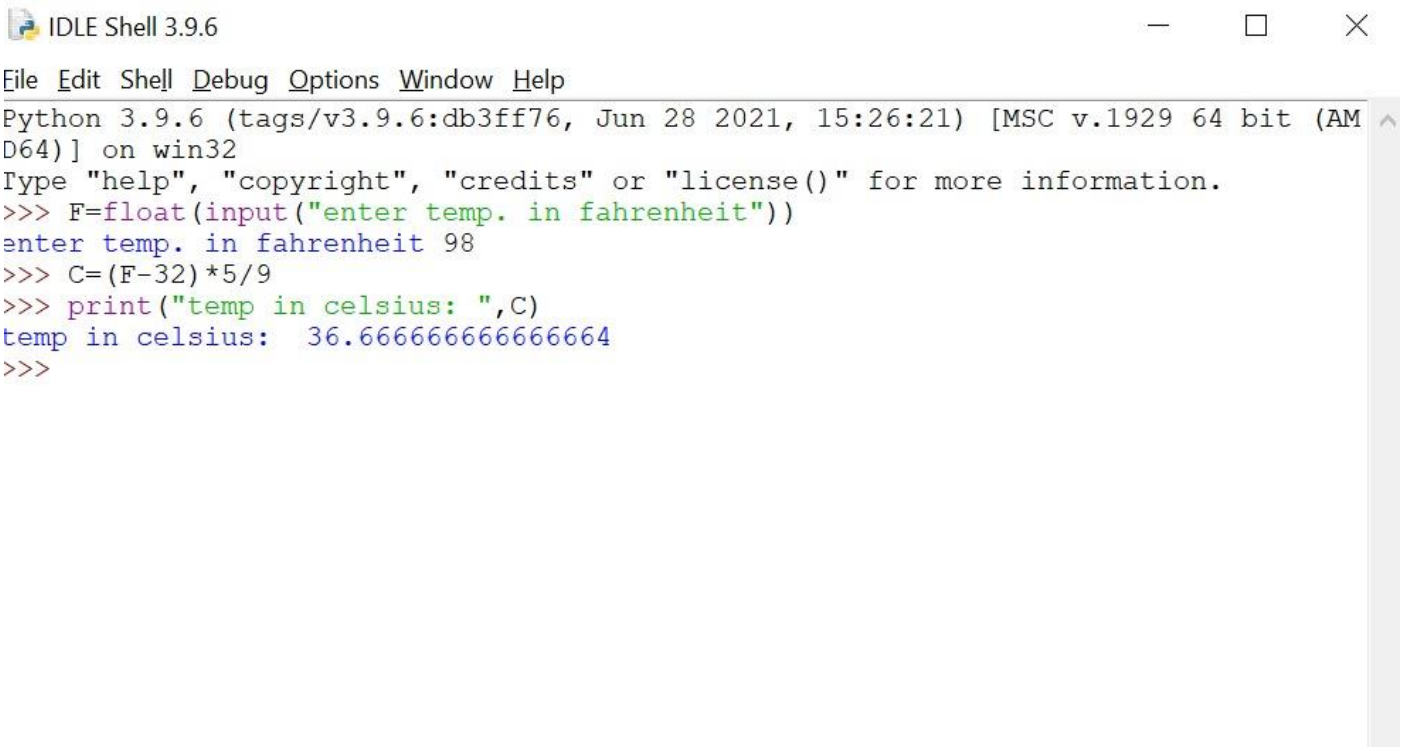
Solution:



H. Convert a temperature from Celsius to Fahrenheit.

C =(F-32) * 5/9

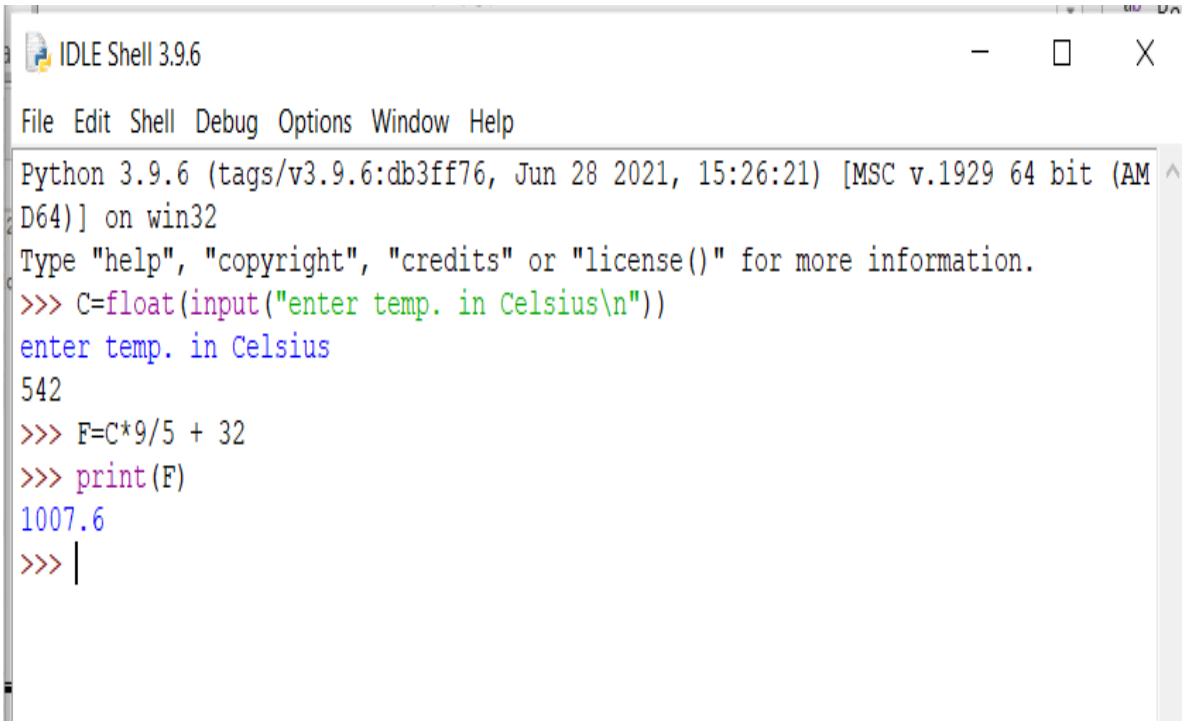
Solution:



I. Convert a temperature from Fahrenheit to Celsius.

F=C*9/5 +32

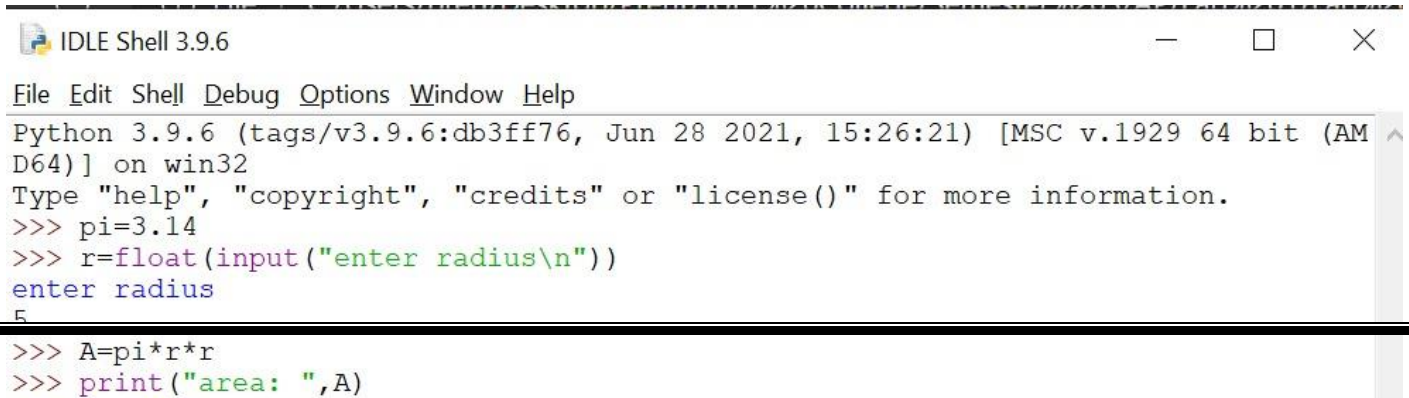
Solution:



J. Compute the area of circle, when its diameter is given.

$$A = \pi r^2$$

Solution:

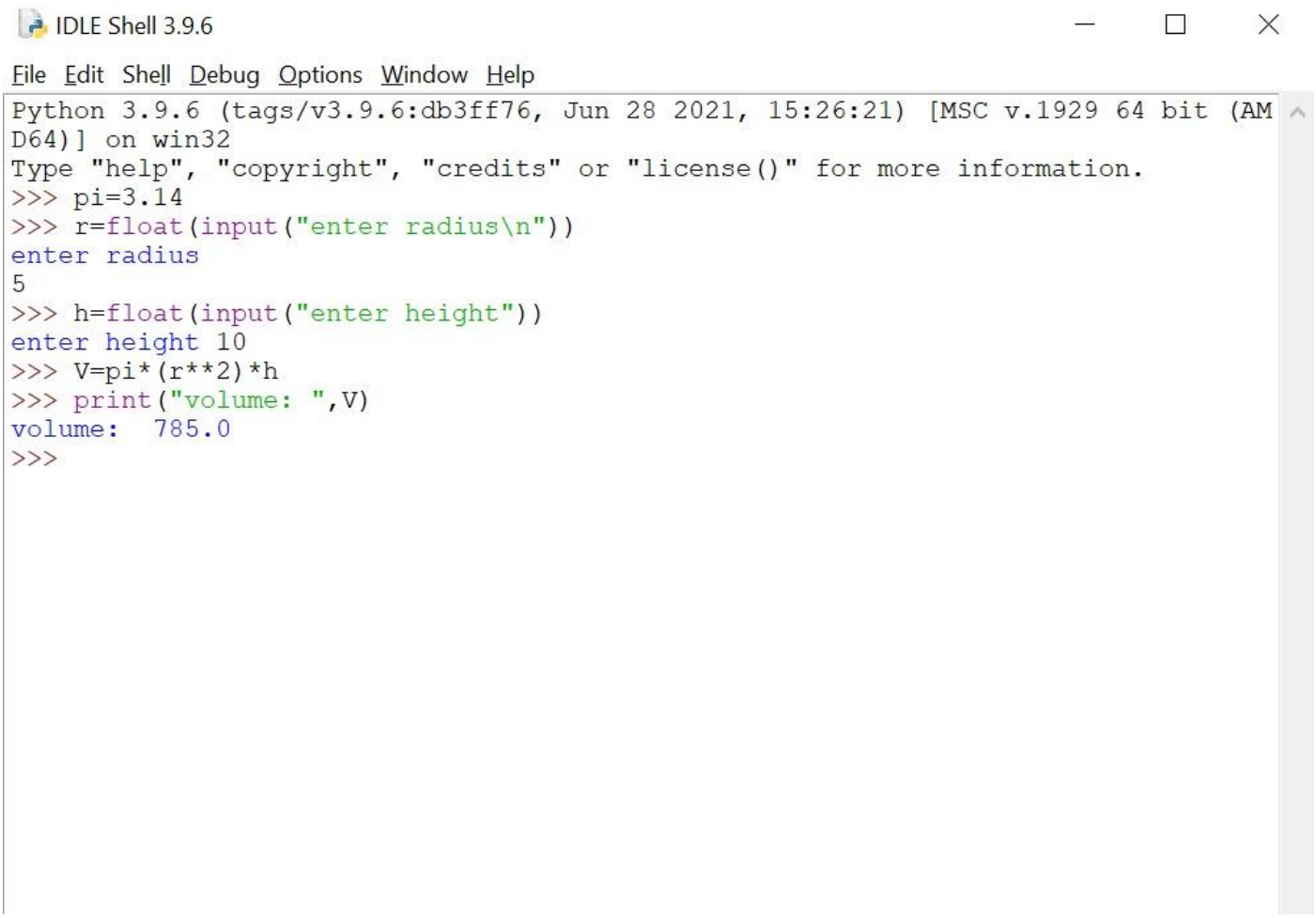


K. Compute the volume of a cylinder, when its height and diameter is given. The volume V for a

right circular cylinder with radius r and height h is given by the formula:

$$V = \pi r^2 h$$

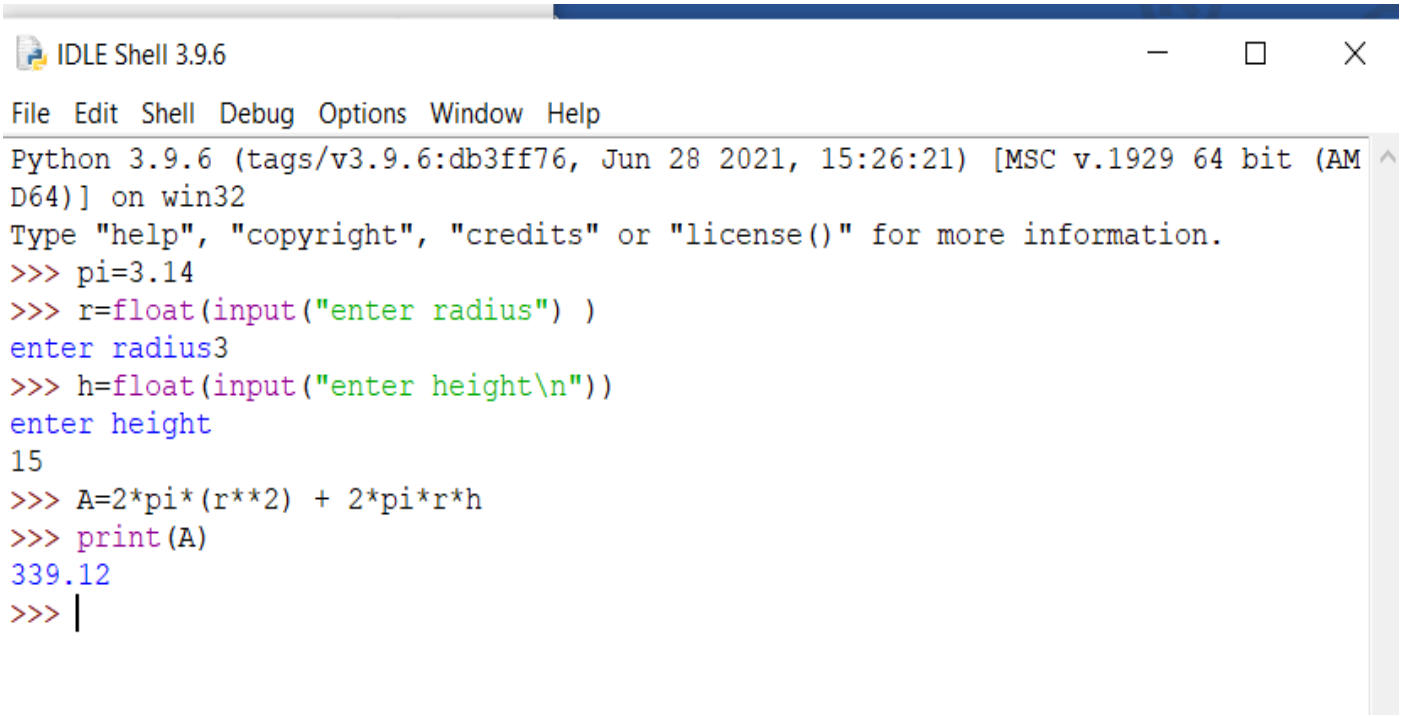
Solution:



L. Compute the surface area of a cylinder, when its height and diameter is given.

$$\mathbf{A = 2\pi r^2 + 2\pi rh}$$

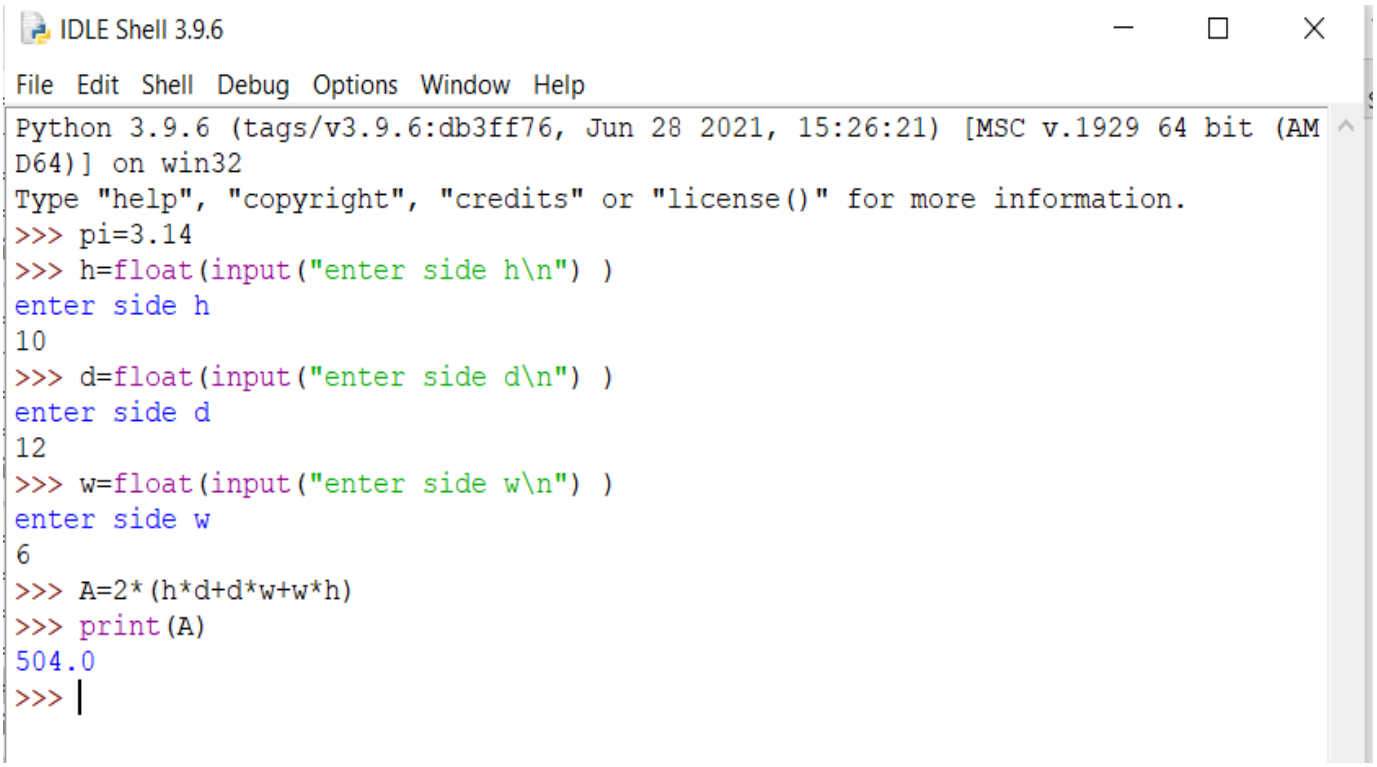
Solution:



M. Compute the area of a rectangular prism, when it's all sides is given.

$$A = 2 * (H * D * D * W * W * H)$$

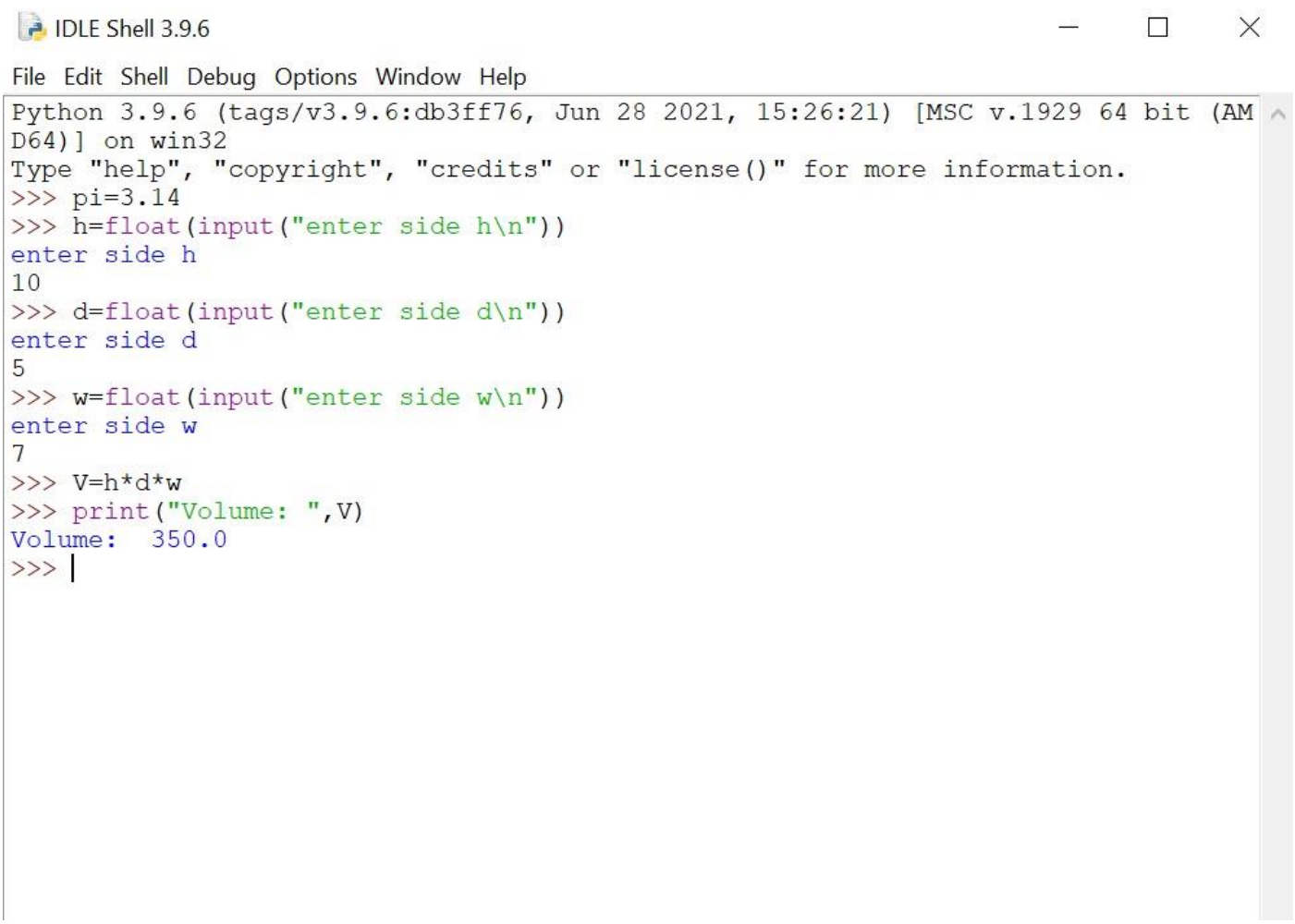
Solution:



N. Compute the volume of a rectangular prism, when it's all sides are given.

Volume=h.d.w

Solution:


IDLE Shell 3.9.6
File Edit Shell Debug Options Window Help
Python 3.9.6 (tags/v3.9.6:db3ff76, Jun 28 2021, 15:26:21) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> pi=3.14
>>> h=float(input("enter side h\n"))
enter side h
10
>>> d=float(input("enter side d\n"))
enter side d
5
>>> w=float(input("enter side w\n"))
enter side w
7
>>> V=h*d*w
>>> print("Volume: ",V)
Volume: 350.0
>>>