Answers:

1.

a =5

b =6

c =a+b

2.

'2' + '5' produces '25'

3.

pi = 3.14

area = pi\*3\*3

perimeter =2\*pi\*3

4.

x = 123446754336788543835697

y = 3.14159265358979323846

x =float(x)

y =int(y)

5.

foobar ='"No, thanks, Mom,\" I said, \"I don't know how long it will take."'

6.

# Assign 'HelloWorld!' to variable a

a = 'HelloWorld!'

# b contains 'HelloWorld!HelloWorld!HelloWorld!HelloWorld!HelloWorld!'

b =

7.

greeting = "Hello Google!"

# number of characters stored in the variable greeting

number\_of\_char =len(greeting)

# repeat the greetings based on the number of character in 'greeting'

greetings=greeting\*number\_of\_char

8.

# Write a function, given a string of characters, return the string together with '\_'s of the same length.

def underline(title):

   return title + '\n' + len(title) \* '\_'

9.

# Use one or more string methods in above examples, extract the substring

# surrounded by 'xyz' at the beginning and end. Replace the ',' in the substring with '|'.

# and remove all trailing space.

str1  = 'abcefghxyzThis,is,the,target,string  xyzlkdjf'

idx1 = str1.find('xyz')                    # get the position of 'xyz'

idx2 = str1.find('xyz'  , idx1+1) # get the next 'xyz'

str1 = str1[idx1+3:idx2].replace(',','|'  ) # replace ',' with '|'

str1 = str1.strip()                           # strip trailing spaces.

10.

# Assign arbitrary values to the variables such that they are of the types used in the examples

a = 'str'

b = 1

c = 12.345

d = [10,20,30]

11.

B and D

12.

# Compute the sum and product of 2 complex numbers:

# (2+3j) and (4+5j)

a = (2+3j)

b = (4+5j)

sum\_ab = a+b

prod\_ab = a\*b

13.

# Write a function that does a decimal to hexadecimal conversion.

# Hint: Make use of "%x" for hexadecimal format.

def dec2hex(num):return str('0x' + '%.2x' % num)

14.

# Extract each word from 'greetings' and assign to

# variables 'first', 'middle' and 'last'.

greetings = "How are you"

first  = greetings[0 :3 ]

middle = greetings[ 4:7 ]

last   = greetings[8 :11 ]

15.

a = 25

b = int(031)

c = int(0x19)

16.

x = 1, y = 4

17.

<type 'int'>

18.

True

Part 2: Answers:

1.

def addNumber(x, y): return x+y;

2.

def subtractNumber(x, y): return x-y;

3.

def getBiggerNumber(x,y):

if x>y:

return x;

else:

return y;

4.

import math

# Calculate the square root of 16 and stores it in the variable a

a =math.sqrt(16)

# Calculate 3 to the power of 5 and stores it in the variable b

b =math.pow(3,5)

# Calculate area of circle with radius = 3.0 by making use of the math.pi constant and store it in the variable c

c = math.pi\*3.0\*3.0

5.

def Cel2Fah(temp):

Fah = temp \* 9 / 5 + 32

Fah = float(Fah)

Fah\_string = str(Fah)

       a = Fah\_string.split('.')

       b = a[1][0:2]

       if len(b) < 2:

        b = b + '0'

       elif len(b) > 2:

        b = float(b)

        b = round(b)

        b = str(b)

               b = b[0:2]

       c = a[0]

       f = str(c) + '.' + str(b)

       return f

6.

def BMI(weight, height):

b = float(weight) / (float(height) \* float(height))

c = '%.1f' % b

return c

7.

def percent(x,y): return int((float(x) / y) \* 100)

8.

import math

def hypotenuse(a, b):

x=(a\*a)+(b\*b)

return math.sqrt(x);

9. return sum(x % 10 for x in numList)

10.

def introduce(name, age=0):

   msg = "My name is %s. " % name

   if age == 0:

      msg += "My age is secret."

   else:

      msg += "I am %s" % age +  " years old."

   return msg

11.

def isEquilateral(x, y, z):

if x == y and x == z and x>0:

return True;

else:

return False;

12.

def quadrtic(a,b,c):

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

if d < 0:

return "This equation has 2 complex roots."

elif d > 0:

return "This equation has 2 real roots."

else: # d == 0

return "This equation has 1 real root."

13.

def add\_first\_and\_last(input\_list):

result\_list=list()

for number in input\_list:

printed=str(number)

result\_list.append(printed[0]+printed[-1])

return result\_list

14.

even = lambda x: x % 2 == 0

15.

def getScore(data):

“”” A function that computes and returns the final score.”””

Print “ getscore”

16.

def addOne(x):

return x + 1

def useFunction(addone, x):

return addOne(x)\*\*2

17.

import math

def calDistance (x1, y1, x2, y2):

x = math.pow((x2-x1), 2)

y = math.pow((y2-y1), 2)

z = math.pow((x + y), 0.5)

return z

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