Lab 03 – Data types & Operators

Problem 01 : Last digit of integer

Given an integer number, print its last digit.

input:43

output:3

input:34242

output:2

Problem 02: Two digits

Given a two-digit number, print its digits separately.

input 34

output 3,4

Problem 03: Swap digits

Given a two-digit number, swap its digits as shown in the tests below.

Input

23,34

Output

34,23

Problem 04: Last two digits

Given an integer number, print its last two digits.

Input

1232

Output

32

Problem 05: Fractional part

Given an integer, print its fractional part.

Input

67.89

Output

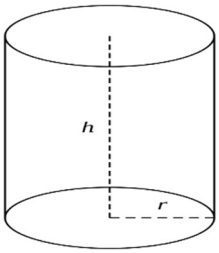
89

Problem 06: Ice-Cream

If Ram buys two ice creams, each costing Rs 50 and Shyam buys three ice creams, each costing Rs 40, write a Python program to determine the total price of ice creams bought by Ram and Shyam.

Problem 07 : Shapes

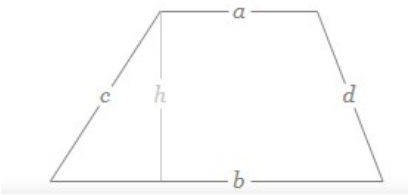
Calculate and display the volume and area of a cylinder. (If the Height and Radius is 10 and 5 respectively)



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

$$A = 2\pi r h + 2\pi r^2$$

Calculate the area of a trapezoid. (You can assume that a = 5, b = 8 and h = 6)



$$A = \frac{a+b}{2}h$$

Exercise

1. First, predict the output of the following python programs. Then execute each in the shell and check whether your predictions were correct or not.

    1. 3/2
    2. 3//2
    3. 2<3
    4. 2<3<4
    5. 4<5<2
    6. x=y=z Assume x=2, y=3 and z=4.
    7. x=y+=z
    8. +x (Assume x=-3)
    9. -x (Assume x=-3)
    10. not x (Assume x= 1
    11. 1%4+2%4+3%4+4%4
    12. X and Y
        a. Assume X=2 and Y=2
        b. Assume X=2 and Y=0
        c. Assume X= True and Y=True
        d. Assume X= False and Y=True
        e. Assume X= False and Y=False
    13. 2**4*3
    14. 2+(3-2)
    15. 12/3/2
    16. “python” > “java”
    17. ‘5’+‘10’

2. Try out the following python code to print all keywords in the python version installed in your computer

```
File  Edit  Format  Run  Options  Window  Help
# Python program to print the list of all keywords
# importing the module
import keyword
print("Python keywords are...")
print(keyword.kwlist)
```

3. Try out the following python code to print all keywords in the python version installed in your computer

```
File  Edit  Format  Run  Options  Window  Help
# Python program to print the built
# in functions
import builtins
print(dir(builtins))
```

4. Write python instructions to calculate n power p
5. Read a number and numeric character. Display the sum.