02- Operators in Python

Ex. No. : 2.1 Date:

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Widgets and Gizmos

An online retailer sells two products: widgets and gizmos. Each widget weighs 75 grams. Each gizmo weighs 112 grams. Write a program that reads the number of widgets and the number of gizmos from the user. Then your program should compute and display the total weight of the parts.

Sample Input

10

20

Sample Output

The total weight of all these widgets and gizmos is 2990 grams.

For example:

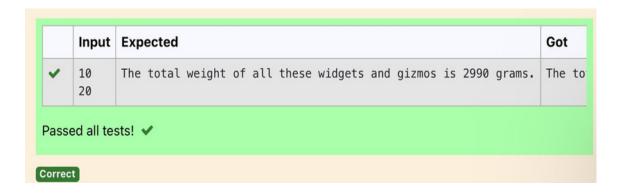
Input Result

10 20	The total weight of all these widgets and gizmos is 2990 grams.
Prog	gram:

a=int(input())

b=int(input())

print("The total weight of all these widgets and gizmos is",((a*75)+(b*112)),"grams.")



Ex. No. : 2.2 Date:	2.2	Date:
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Register No.: Name:

Doll Sings ____

In London, every year during Dasara there will be a very grand doll show. People try to invent new dolls of different varieties. The best-sold doll's creator will be awarded with a cash prize. So people broke their heads to create dolls innovatively. Knowing this competition, Mr.Lokpaul tried to create a doll that sings only when an even number is pressed and the number should not be zero and greater than 100.

IF Lokpaul wins print true, otherwise false.

Sample Input

10

Sample Output

True

Explanation:

Since 10 is an even number and a number between 0 and 100, True is printed

Program:

```
a=int(input())
if(a>0 and a<100 and a%2==0):
    print("True")
else:
    print("False")</pre>
```



Ex. No.	:	2.3	Date:	
Register No.	:		Name	: :
He wants to a shop to bu different nur	day is ir distribu y a pac nbers o nocolat	n next month, ute some chook ket of chocola of chocolates. es, which can	colates to all of his fo ites. At the chocolat He wants to buy su	_ nning to invite N of his friends. riends after the party. He went to te shop, 4 packets are there with ch a packet which contains a ally among all of his friends. Help
OUTPUT:	D P4-No	o of chocolate		
SAMPLE INPL	-	•	and "False" if he can	t buy that packet.
5 25 12 10 9				
OUTPUT				
True False Tr	ue Fals	se		

Program:

```
a=int(input())
b=int(input())
c=int(input())
d=int(input())
e=int(input())
print(b%a==0,c%a==0,d%a==0,e%a==0)
```

	Input	Expected	Got		
~	5 25 23 20 10	True False True True	True False True True	~	
~	4 23 24 21 12	False True False True	False True False True	~	
~	8 64 8 16 32	True True True	True True True	~	

Ex. No.	:	2.4	Date:
Register No.:	:		Name:
Hammin	g We	eight	
		gram that takes a integer be in its binary form.(Hint:use	etween 0 and 15 as input and displays python bitwise operator.
Sample Inpu	t		
3			
Sample Outp	ut:		
Explanation:			
The binary re	preser	ntation of 3 is 011, hence th	ere are 2 ones in it. so the output is 2.
Prograr	n:		
a=int(input())			
n=bin(a)			
n=n.replace("	0b","")		
s=str(n) c=list	(s) d=0)	
for i in range(len(c)):		
if(int(c[i])==	:1):		
d+=1			
print(d)			



Ex. No. : 2.5 Date:

Register No.: Name:

Compound Interest

Pretend that you have just opened a new savings account that earns 4 percent interest per year. The interest that you earn is paid at the end of the year, and is added to the balance of the savings account. Write a program that begins by reading the amount of money deposited into the account from the user. Then your program should compute and display the amount in the savings account after 1, 2, and 3 years. Display each amount so that it is rounded to 2 decimal places.

Sample Input:

10000

Sample Output:

Balance as of end of Year 1: \$10400.00.

Balance as of end of Year 2: \$10816.00.

Balance as of end of Year 3: \$11248.64

Program:

a=int(input())

b=(a*0.04)+a

c=b+(b*0.04)

d=c+(c*0.04)

print("Balance as of end of Year 1: \${:.2f}.".format(b))

print("Balance as of end of Year 2: \${:.2f}.".format(c))

print("Balance as of end of Year 3: \${:.2f}.".format(d))

	Input	Expected	Got
~	10000	Balance as of end of Year 1: \$10400.00.	Balance as of end of Year 1: \$
		Balance as of end of Year 2: \$10816.00.	Balance as of end of Year 2: \$
		Balance as of end of Year 3: \$11248.64.	Balance as of end of Year 3: \$
~	20000	Balance as of end of Year 1: \$20800.00.	Balance as of end of Year 1: \$
		Balance as of end of Year 2: \$21632.00.	Balance as of end of Year 2: \$
		Balance as of end of Year 3: \$22497.28.	Balance as of end of Year 3: \$

Correct

Marks for this submission: 1.00/1.00.

Ex. No.	:	2.6	Date:
Register No.:	:		Name:

Eligible to donate blood

A team from the Rotract club had planned to conduct a rally to create awareness among the Coimbatore people to donate blood. They conducted the rally successfully. Many of the Coimbatore people realized it and came forward to donate their blood to nearby blood banks. The eligibility criteria for donating blood are people should be above or equal to 18 and his/ her weight should be above 40. There was a huge crowd and staff in the blood bank found it difficult to manage the crowd. So they decided to keep a system and ask the people to enter their age and weight in the system. If a person is eligible he/she will be allowed inside.

Write a program and feed it to the system to find whether a person is eligible or not.

```
Input Format:
Input consists of two integers that correspond to the age and weight of a
person
respectively.
Output Format:
Display True(IF ELIGIBLE)
Display False (if not eligible)
Sample Input
19
45
Sample Output
True
Program:
a=int(input()) b=int(input()) if(a>=18 and b>40):
```

```
print("True")
else:
  print("False")
```



Ex. No. : 2.7 Date:

Register No.: Name:

C or D

Mr.Ram has been given a problem kindly help him to solve it. The input of the program is either 0 or 1. IF 0 is the input he should display "C" if 1 is the input it should display "D". There is a constraint that Mr. Ram should use either logical operators or arithmetic operators to solve the problem, not anything else.

Hint:

Use ASCII values of C and D.

Input Format:

An integer x, 0 <= x <= 1.

Output Format:

output a single character "C" or "D"depending on the value of x. Input 1:

0
Output 1:

C

Input 2:
1
Output 1:

Program:

a=int(input())

if(a==0):

print("C")

else:

print("D")



Ex. No.	:	2.8	Date:	
Register No	.:		Name:	

Troy Battle

In the 1800s, the battle of Troy was led by Hercules. He was a superstitious person. He believed that his crew can win the battle only if the total count of the weapons in hand is in multiple of 3 and the soldiers are in an even number of count. Given the total number of weapons and the soldier's count, Find whether the battle can be won or not according to Hercules's belief. If the battle can be won print True otherwise print False.

Input format:

Line 1 has the total number of weapons Line 2 has the total number of Soldiers.

Output Format:

If the battle can be won print True otherwise print False.

```
Sample Input:
32
43
Sample Output:'
False

Program:
a=int(input())
b=int(input()) if(a%3==0
and b%2==0):
  print("True")
else:
  print("False")
```

	Input	Expected	Got	
~	32 43	False	False	~
~	273 7890	True	True	~
~	800 4590	False	False	~
~	6789 32996	True	True	~

Ex. No.	:	2.9	Date:

Register No.: Name:

Tax and Tip

The program that you create for this exercise will begin by reading the cost of a meal ordered at a restaurant from the user. Then your program will compute the tax and tip for the meal. Use your local tax rate (5 percent) when computing the amount of tax owing. Compute the tip as 18 percent of the meal amount (without the tax). The output from your program should include the tax amount, the tip amount, and the grand total for the meal including both the tax and the tip. Format the output so that all of the values are displayed using two decimal places.

Sample Input

100

Sample Output

The tax is 5.00 and the tip is 18.00, making the total 123.00

Program:

a=int(input())

print("The tax is $\{:.2f\}$ and the tip is $\{:.2f\}$, making the total $\{:.2f\}$ ".format((a*0.05),(a*0.18),(a*((a*0.05)+(a*0.18)))))

	Expected	Got
100	The tax is 5.00 and the tip is 18.00, making the total 123.00	The tax
250	The tax is 12.50 and the tip is 45.00, making the total 307.50	The tax
		and the control and the copy of the copy o

Ex. No. : 2.10 Date:

Register No.: Name:

Return last digit of the given number

Write a program that returns the last digit of the given number. Last digit is being referred to the least significant digit i.e. the digit in the ones (units) place in the given number.

The last digit should be returned as a positive number.

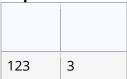
For example,

if the given number is 197, the last digit is 7

if the given number is -197, the last digit is 7

For example:

Input Result



Program:

a=int(input())
print(abs(a)%10)

