

Ex. No. : 2.8

Date:

Register No: 231501049

Name: GNAANESH B B

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	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Ex. No. : **2.9**

Date:

Register No: **231501049**

Name: **GNAANESH B B**

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))))
```

	Input	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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Ex. No. : **2.10**

Date:

Register No: **231501049**

Name: **GNAANESH B B**

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
123	3

PROGRAM:

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

	Input	Expected	Got	
✓	197	7	7	✓
✓	-197	7	7	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

03 - Selection Structures in Python

Ex. No. : 3.1

Date:

Register No: 231501049

Name: GNAANESH B B

Admission Eligibility

Write a program to find the eligibility of admission for a professional course based on the following criteria:

Marks in Maths ≥ 65

Marks in Physics ≥ 55

Marks in Chemistry ≥ 50

Or

Total in all three subjects ≥ 180

Sample Test Cases

Test Case 1

Input

70

60

80

Output

The candidate is eligible

Test Case 2

Input

50

80

80

Output

The candidate is eligible

Test Case 3

Input

50

60

40

Output

The candidate is not eligible

For example:

Input	Result
50 80 80	The candidate is eligible

PROGRAM:

```
a=int(input())
b=int(input())
c=int(input())

if(a>=65 and b>=55 and c>=50):
    print("The candidate is eligible")
elif(a+b+c>=180):
    print("The candidate is eligible")
else:
    print("The candidate is not eligible")
```

	Input	Expected	Got	
✓	70 60 80	The candidate is eligible	The candidate is eligible	✓
✓	50 80 80	The candidate is eligible	The candidate is eligible	✓
✓	50 60 40	The candidate is not eligible	The candidate is not eligible	✓
✓	20 10 25	The candidate is not eligible	The candidate is not eligible	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Ex. No. : 3.2

Date:

Register No: 231501049

Name: GNAANESH B B

Classifying Triangles

A triangle can be classified based on the lengths of its sides as equilateral, isosceles or scalene. All three sides of an equilateral triangle have the same length. An isosceles triangle has two sides that are the same length, and a third side that is a different length. If all of the sides have different lengths then the triangle is scalene.

Write a program that reads the lengths of the three sides of a triangle from the user. Then display a message that states the triangle's type.

Sample Input 1

60

60

60

Sample Output 1

That's a equilateral triangle

For example:

Input	Result
40 40 80	That's a isosceles triangle

PROGRAM:

```
a=int(input())  
  
b=int(input())  
  
c=int(input())  
  
if(a==b and b==c):  
    print("That's a equilateral triangle")  
  
elif(a!=b and b==c or a==b and b!=c):  
    print("That's a isosceles triangle")  
  
elif(a!=b and b!=c):  
    print("That's a scalene triangle")
```

	Input	Expected	Got	
✓	60 60 60	That's a equilateral triangle	That's a equilateral triangle	✓
✓	40 40 80	That's a isosceles triangle	That's a isosceles triangle	✓
✓	50 60 70	That's a scalene triangle	That's a scalene triangle	✓
✓	50 50 80	That's a isosceles triangle	That's a isosceles triangle	✓
✓	10 10 10	That's a equilateral triangle	That's a equilateral triangle	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Ex. No. : 3.3

Date:

Register No: 231501049

Name: GNAANESH B B

Electricity Bill

Write a program to calculate and print the Electricity bill where the unit consumed by the user is given from test case. It prints the total amount the customer has to pay. The charge are as follows:

Unit	Charge / Unit
Upto 199	@1.20
200 and above but less than 400	@1.50
400 and above but less than 600	@1.80
600 and above	@2.00

If bill exceeds Rs.400 then a surcharge of 15% will be charged and the minimum bill should be of Rs.100/-

Sample Test Cases

Test Case 1

Input

50

Output

100.00

Test Case 2

Input

300

Output

517.50

For example:

Input	Result
500	1035.00

PROGRAM:

```
a=float(input())
```

```
b=0
```

```
if(a<=199):
```

```
    b=a*1.2
```

```
elif(200<=a<400):
```

```
    b=a*1.5
```

```
elif(400<=a<600):
```

```
    b=a*1.8
```

```
elif(a>600):
```

```
    b=a*2.0
```

```

if (int(b)<100):

    print(" {:.2f} ".format(100))

else:

    if(b>400.00):

        print(" {:.2f} ".format((b+(b*0.15)))))

    else:

        print(" {:.2f} ".format(b))

```

	Input	Expected	Got	
✓	50	100.00	100.00	✓
✓	100.00	120.00	120.00	✓
✓	500	1035.00	1035.00	✓
✓	700	1610.00	1610.00	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Ex. No. : 3.4

Date:

Register No: 231501049

Name: GNAANESH B B

IN/OUT

Ms. Sita, the faculty handling programming lab for you is very strict. Your seniors have told you that she will not allow you to enter the week's lab if you have not completed atleast half the number of problems given last week. Many of you didn't understand this statement and so they requested the good programmers from your batch to write a program to find whether a student will be allowed into a week's lab given the number of problems given last week and the number of problems solved by the student in that week.

Input Format:

Input consists of 2 integers.

The first integer corresponds to the number of problems given and the second integer corresponds to the number of problems solved.

Output Format:

Output consists of the string “IN” or “OUT”.

Sample Input and Output:

Input

8

3

Output

OUT

For example:

Input	Result
8	
3	OUT

PROGRAM:

```
a=int(input())
```

```
b=int(input())
```

```
c=(a/2)
```

```
if(c>b):
```

```
    print("OUT")
```

```
else:
```

```
    print("IN")
```

	Input	Expected	Got	
✓	8 3	OUT	OUT	✓
✓	8 5	IN	IN	✓
✓	20 9	OUT	OUT	✓
✓	50 31	IN	IN	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Ex. No. : 3.5

Date:

Register No: 231501049

Name: GNAANESH B B

Vowel or Consonant

In this exercise you will create a program that reads a letter of the alphabet from the user. If the user enters a, e, i, o or u then your program should display a message indicating that the entered letter is a vowel. If the user enters 'y' then your program should display a message indicating that sometimes y is a vowel, and sometimes y is a consonant. Otherwise your program should display a message indicating that the letter is a consonant.

Sample Input 1

i

Sample Output 1

It's a vowel.

Sample Input 2

y

Sample Output 2

Sometimes it's a vowel... Sometimes it's a consonant.

Sample Input3

c

Sample Output 3

It's a consonant.

For example:

Input	Result
y	Sometimes it's a vowel... Sometimes it's a consonant.
u	It's a vowel.
p	It's a consonant.

PROGRAM:

```
a=input()  
if(a=='a' or a=='e' or a=='i' or a=='o' or a=='u'):  
    print("It's a vowel.")  
elif(a=='y'):  
    print("Sometimes it's a vowel... Sometimes it's a  
consonant.")  
else:  
    print("It's a consonant.")
```

	Input	Expected	Got
✓	i	It's a vowel.	It's a vowel.
✓	y	Sometimes it's a vowel... Sometimes it's a consonant.	Sometimes it's a
✓	c	It's a consonant.	It's a consonant
✓	e	It's a vowel.	It's a vowel.
✓	r	It's a consonant.	It's a consonant

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

