** What is 7 to the power of 4?**

```
7**4
```

```
2401
```

** Split this string:**

```
s = "Hi there Sam!"
```

**into a list. **

```
s = ["Hi","there","Sam!"]
s
```

Show hidden output

```
1
```

```
['Hi', 'there', 'dad!']
```

** Given the variables:**

```
planet = "Earth"
diameter = 12742
```

** Use .format() to print the following string: **

```
The diameter of Earth is 12742 kilometers.
```

```
planet = "Earth"
diameter = 12742
print("The diameter of {} is {} kilomeers.".format(planet,diameter))
```

Show hidden output

```
1
```

```
The diameter of Earth is 12742 kilometers.
```

```
1 lst = [1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]
```

```
1 lst[3][1][2][0]
```

```
'hello'
```

** Given this nest dictionary grab the word "hello". Be prepared, this will be annoying/tricky **

```
1 d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
```

```
1 d['k1'][3]['tricky'][3]['target'][3]
2
```

```
'hello'
```

** What is the main difference between a tuple and a list? **

```
1
```

** Create a function that grabs the email website domain from a string in the form: **

```
user@domain.com
```

So for example, passing "user@domain.com" would return: domain.com

```
1 def getDomain(email):
2   return email.split('@')[-1]
3 getDomain('user@domain.com')
```

Show hidden output

```
1
```

```
'domain.com'
```

** Create a basic function that returns True if the word 'dog' is contained in the input string. Don't worry about edge cases like a punctuation being attached to the word dog, but do account for capitalization. **

```
def dog(st):
  return 'dog' in st.lower().split()
dog('My dog name is Dexter.')
```

Show hidden output

```
1
```

```
True
```

** Create a function that counts the number of times the word "dog" occurs in a string. Again ignore edge cases. **

```
def dogCount(st):
  count = 0
  for word in st.lower().split():
    if word == 'dog':
      count = count + 1
  return count
dogCount('Dog eat both meat and also other food items and average life of a dog is 10 to
```

```
2
```

```
1
```

```
2
```

Problem

*You are driving a little too fast, and a police officer stops you. Write a function to return one of 3 possible results: "No ticket", "Small ticket", or "Big Ticket". If your speed is 60 or less, the result is "No Ticket". If speed is between 61 and 80 inclusive, the result is "Small Ticket". If speed is 81 or more, the result is "Big Ticket". Unless it is your birthday (encoded as a boolean value in the parameters of the function) -- on your birthday, your speed can be 5 higher in all cases. *

```
def caught_speeding(speed, is_birthday):

    if is_birthday:
        speeding = speed - 5
    else:
        speeding = speed

    if speeding > 80:
```

```
        return 'Big Ticket'
    elif speeding > 60:
        return 'Small Ticket'
    else:
        return 'No Ticket'
```

```
caught_speeding(90,False)
```

```
'Big Ticket'
```

```
caught_speeding(90,True)
```

```
'Big Ticket'
```

Create an employee list with basic salary values(at least 5 values for 5 employees) and using a for loop retreive each employee salary and calculate total salary expenditure.

```
import pandas as pd
import numpy as np
from google.colab import files
uploaded = files.upload()
```

Browse... No files selected. Upload widget is only available when the cell has been executed in the current browser session. Please rerun this cell to enable.

Saving emp.csv to emp (2).csv

```
import io
df2 = pd.read_csv(io.BytesIO(uploaded['emp.csv']))
NumberOfWorker = int(input('enter the amount of worker'))
salary = 40000
sum = 0.00
print("Employees Salary")
for c in range(NumberOfWorker):
  salary = salary + (0*salary)
  sum = sum + salary
  print(c+1,"\t",salary)
print("Sum : ",str(sum))
```

```
enter the amount of worker5
Employees Salary
1        40000
2        40000
3        40000
4        40000
5        40000
Sum :  200000.0
```

Create two dictionaries in Pvthon:

First one to contain fields as Empid, Empname, Basicpay

Second dictionary to contain fields as DeptName, DeptId.

Combine both dictionaries.

```
def Combine(d1, d2):
  result = {**d1,**d2}
  return result
d1 = {"EmpId":101,"EmpName":'Kiren',"Basicpay":300000}
d2 = {"DeptName":'IT',"DeptId":1034}
d3 = Combine(d1,d2)
print(d3)
```

```
{'EmpId': 101, 'EmpName': 'Kiren', 'Basicpay': 300000, 'DeptName': 'IT', 'DeptId': 10
```

```
1
```