In [1]:

```
# Practical 1 : To plot the graph for 2D
# Name :  Atharv Sunil Bargir
# Roll  No: 10
```

In [2]:

```
# Q1 : To  plot the function f(x) = log10(x) in the interval [0,10].
```

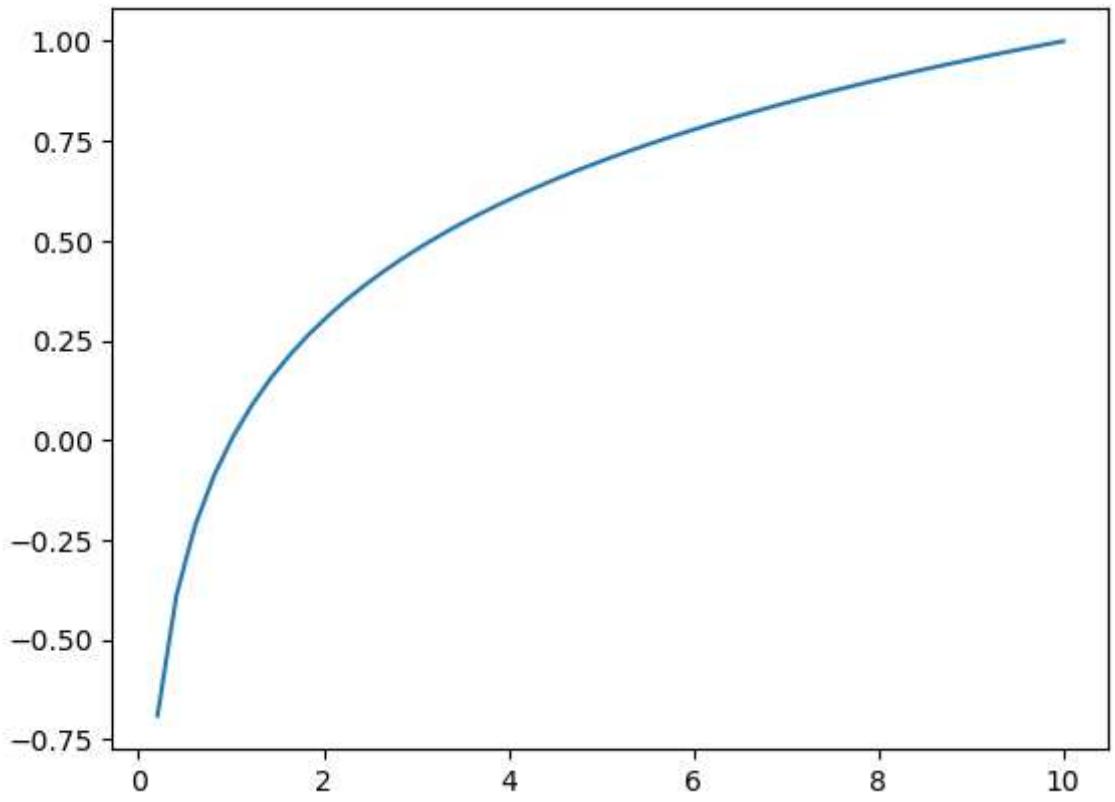
In [3]:

```
import matplotlib.pyplot as plt
import numpy as np
```

In [4]:

```
x=np.linspace(0,10)
y=np.log10(x)
plt.plot(x,y)
plt.show()
```

```
C:\Users\Omkar\AppData\Local\Temp\ipykernel_808\1165464696.py:2: RuntimeWa
rning: divide by zero encountered in log10
  y=np.log10(x)
```



In [5]:

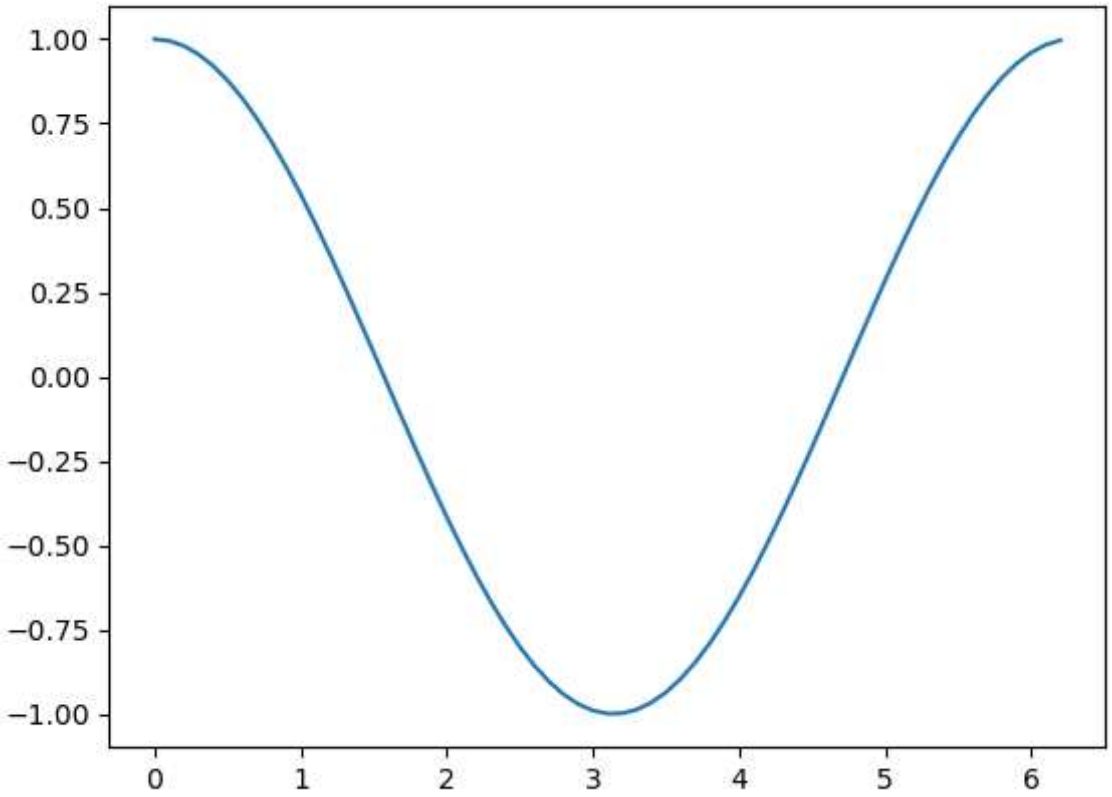
```
#Q2 . :To plot the function f(x)=cos(x) in the interval [0.2pi]
```

In [6]:

```
import matplotlib.pyplot as plt
import numpy as np
```

In [7]:

```
x=np.arange(0,2*(np.pi),0.1)
y=np.cos(x)
plt.plot(x,y)
plt.show()
```



In [8]:

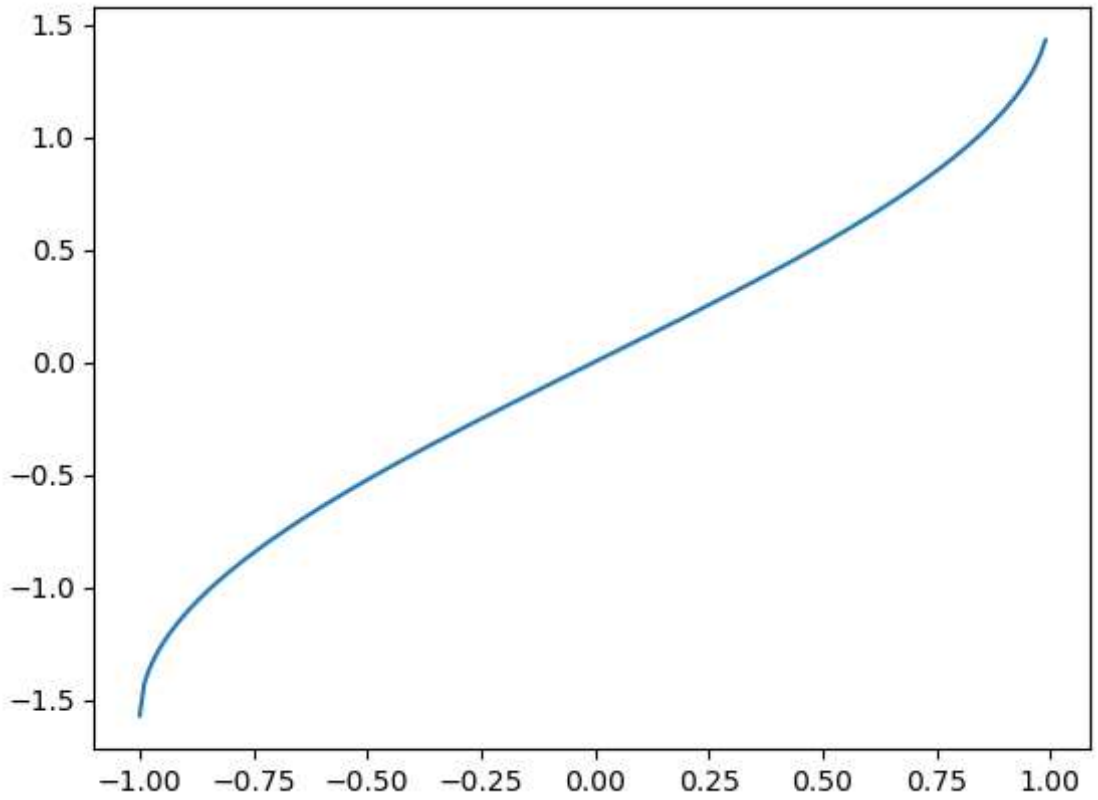
```
# Q3: To plot the function f(x)= sin^-1(x) int the interval [-1,1]
```

In [9]:

```
import matplotlib.pyplot as plt
import numpy as np
```

In [10]:

```
x=np.arange(-1,1,0.01)
y=np.arcsin(x)
plt.plot(x,y)
plt.show()
```



In [11]:

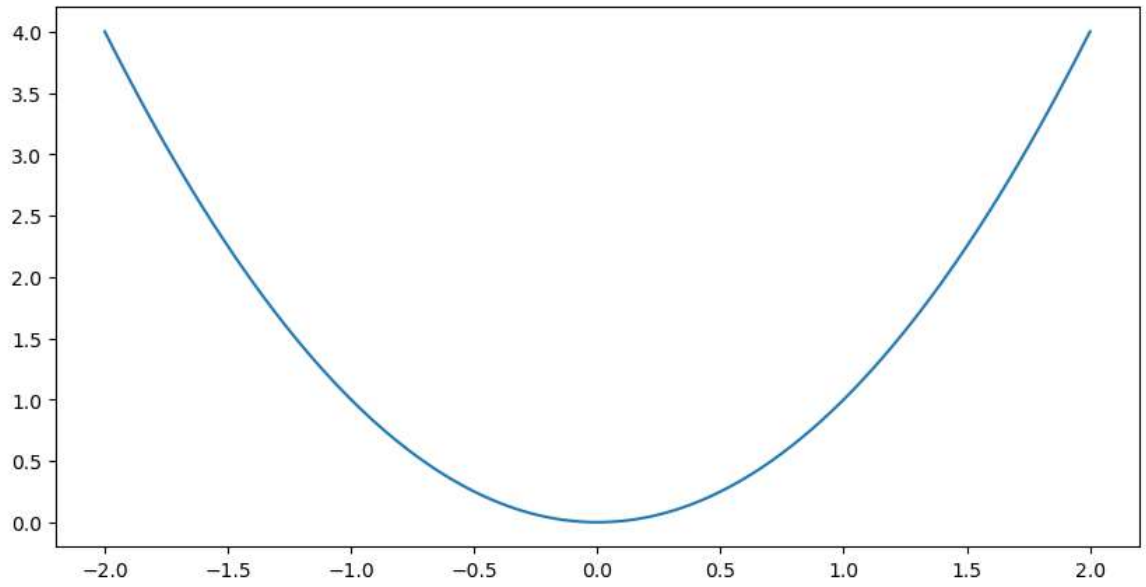
```
# Q4. To plot the function f(x)=x^2 in the interval [-2,2]
```

In [12]:

```
import matplotlib.pyplot as plt
import numpy as np
```

In [13]:

```
x = np.linspace(-2,2,100)
y = x**2
fig = plt.figure(figsize=(10,5))
plt.plot(x,y)
plt.show()
```



In [14]:

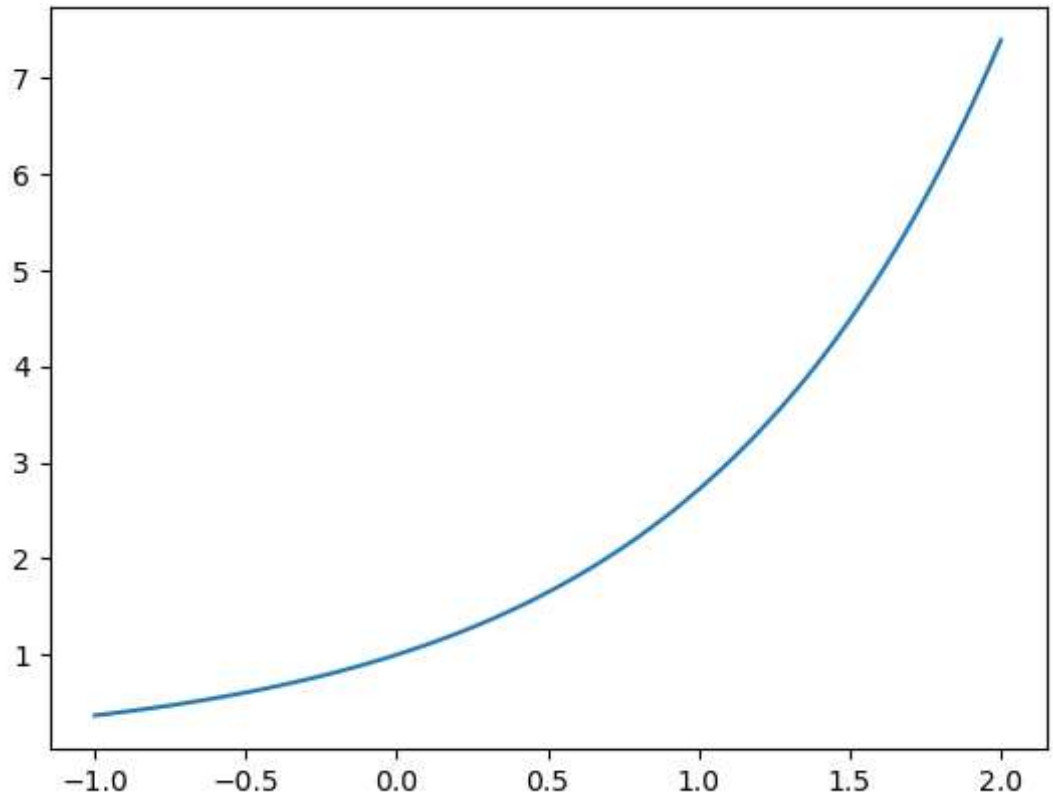
```
#Q5 : To plot the function f(x) = e^x in the interval [-1,100]
```

In [15]:

```
import matplotlib.pyplot as plt
import numpy as np
```

In [16]:

```
x = np.linspace(-1,2,100)
y = np.exp(x)
plt.plot(x,y)
plt.show()
```



In [17]:

```
#Q6. To plot the function f(x)=sin(x)-e^x+3x^2-log10(x) in the interval [0,2pi]
```

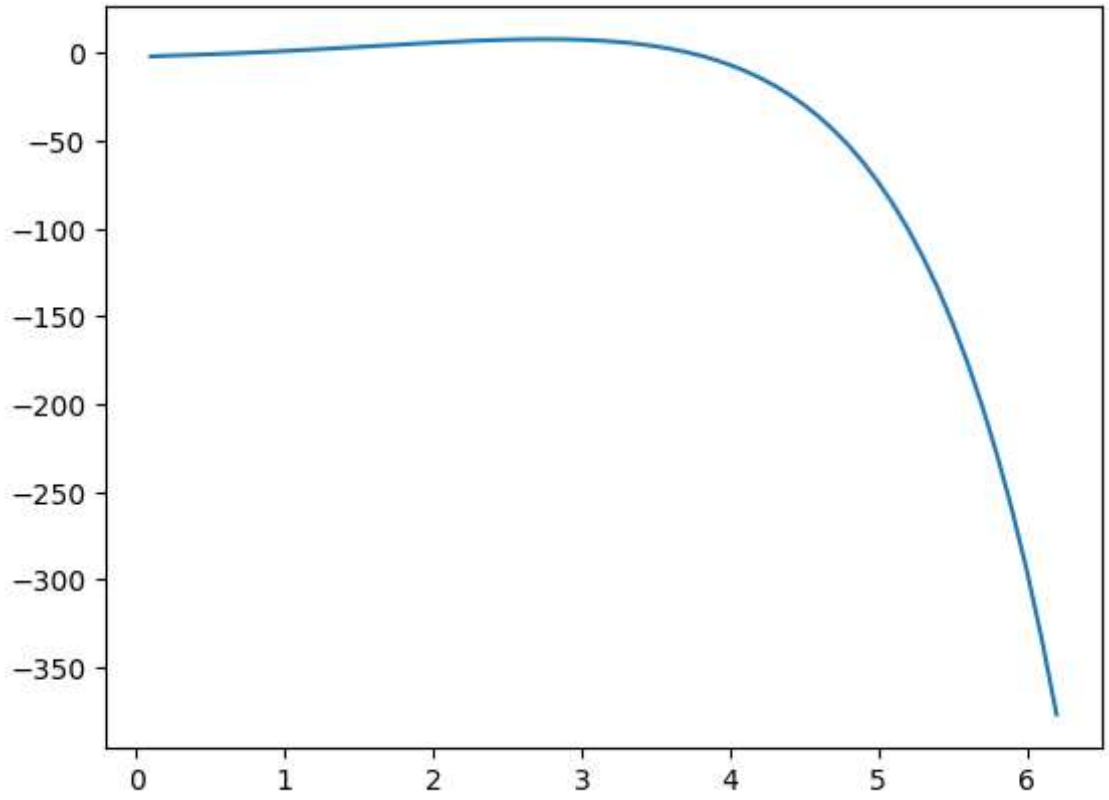
In [18]:

```
import matplotlib.pyplot as plt
import numpy as np
```

In [19]:

```
x=np.arange(0,2*(np.pi),0.1)
y=np.sin(x)-np.exp(x)+3*x**2+np.log10(x)
plt.plot(x,y)
plt.show()
```

```
C:\Users\Omkar\AppData\Local\Temp\ipykernel_808\1274620205.py:2: RuntimeWa
rning: divide by zero encountered in log10
  y=np.sin(x)-np.exp(x)+3*x**2+np.log10(x)
```



In [ ]:

```
```