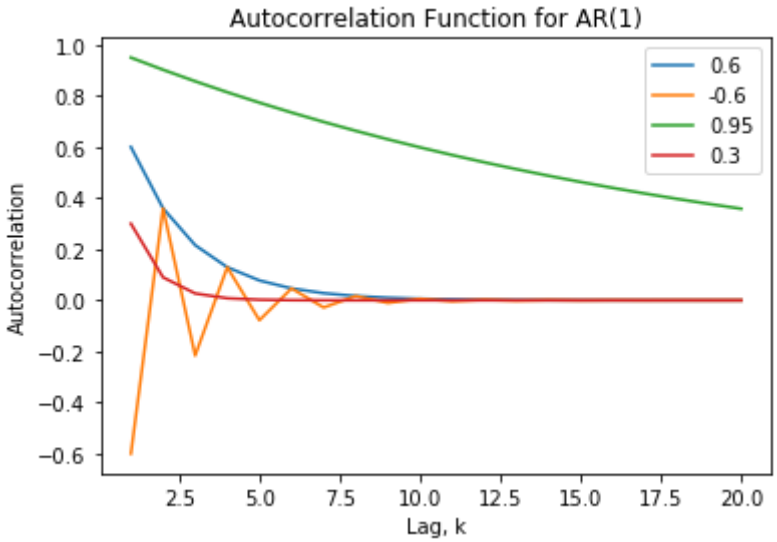
In [1]:
```
import matplotlib.pyplot as plt
import numpy as np
```

In [6]:
```
# phi for parts a-d
phi = np.array([0.6, -0.6, 0.95, 0.3])
k = np.arange(1, 21)
```

In [14]:
```
for i in range(len(phi)):
    plt.plot(k, phi[i]**k)

plt.legend([phi[0], phi[1], phi[2], phi[3]])
plt.title('Autocorrelation Function for AR(1)')
plt.ylabel('Autocorrelation')
plt.xlabel('Lag, k')
plt.show()
```



In [ ]: