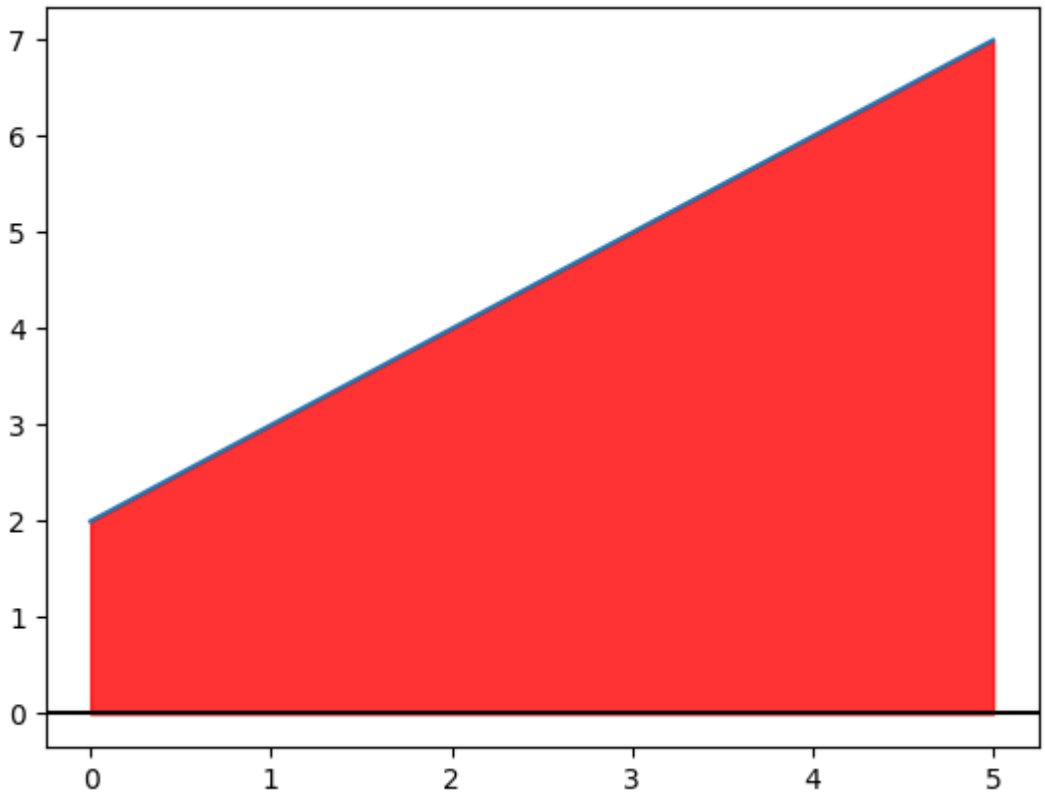
Functions

In [ ]:
```
import numpy as np
from numpy import*
%matplotlib inline
import matplotlib.pyplot as plt

import sympy as sp
from sympy import*
```

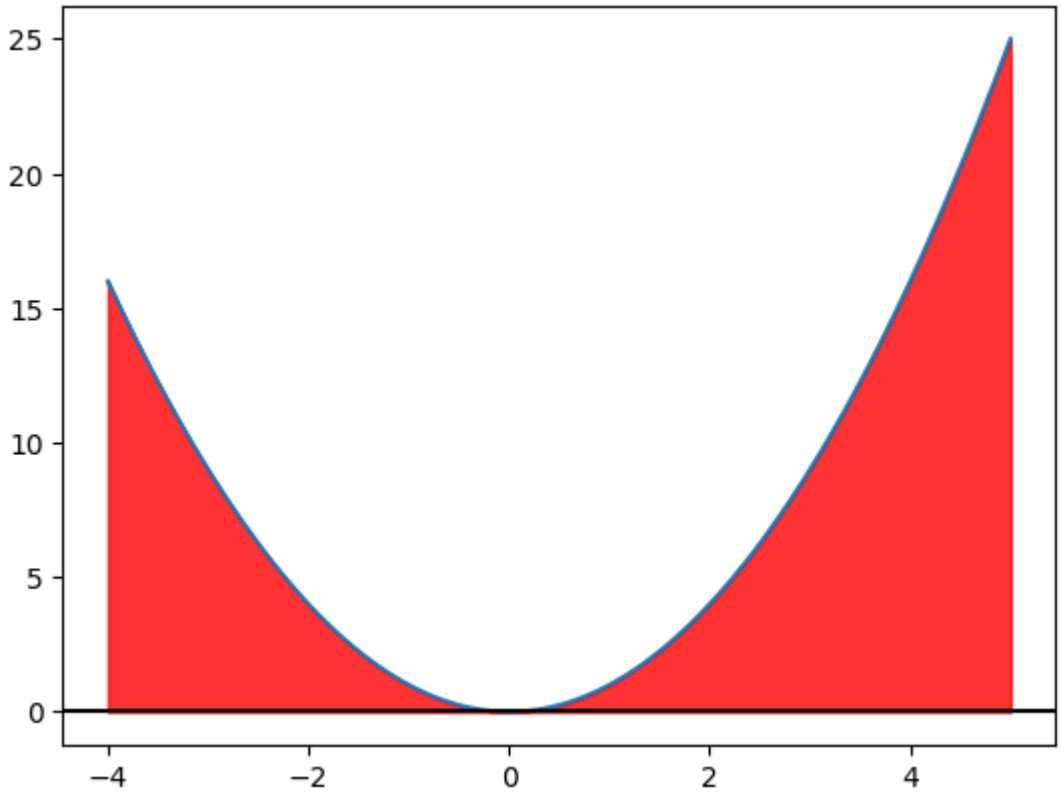
In [ ]:
```
x = np.linspace(0,5,1000)
exp1 = x + 2
plt.plot(x, exp1)
plt.axhline(color = 'black')
plt.fill_between(x, exp1, step = 'pre', color = 'red', alpha = 0.8)
```

Out[ ]:
```
<matplotlib.collections.PolyCollection at 0x7917a4bdf0>
```



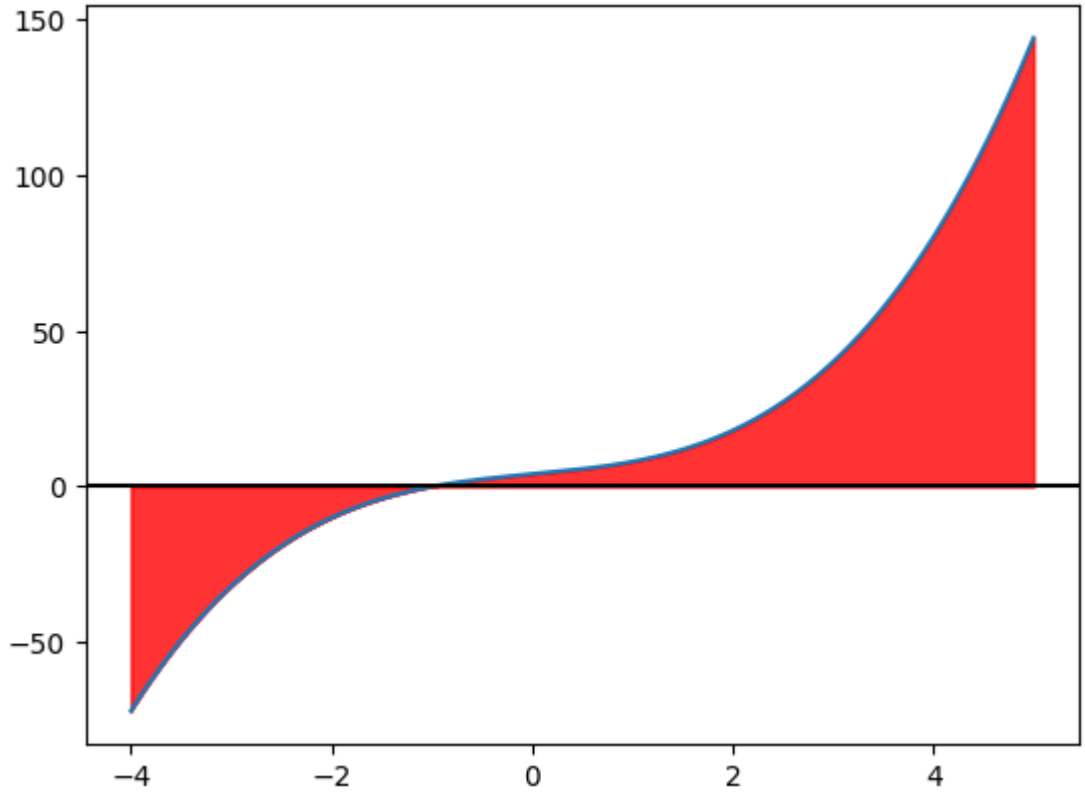
In [ ]:
```
x = np.linspace(-4,5,1000)
exp1 = x ** 2
plt.plot(x, exp1)
plt.axhline(color = 'black')
plt.fill_between(x, exp1, step = 'pre', color = 'red', alpha = 0.8)
```

Out[ ]:
```
<matplotlib.collections.PolyCollection at 0x7917a712b0>
```



In [ ]:
```
x = np.linspace(-4,5,1000)
exp1 = x ** 3 + 3 * x + 4
plt.plot(x, exp1)
plt.axhline(color = 'black')
plt.fill_between(x, exp1, step = 'pre', color = 'red', alpha = 0.8)
```

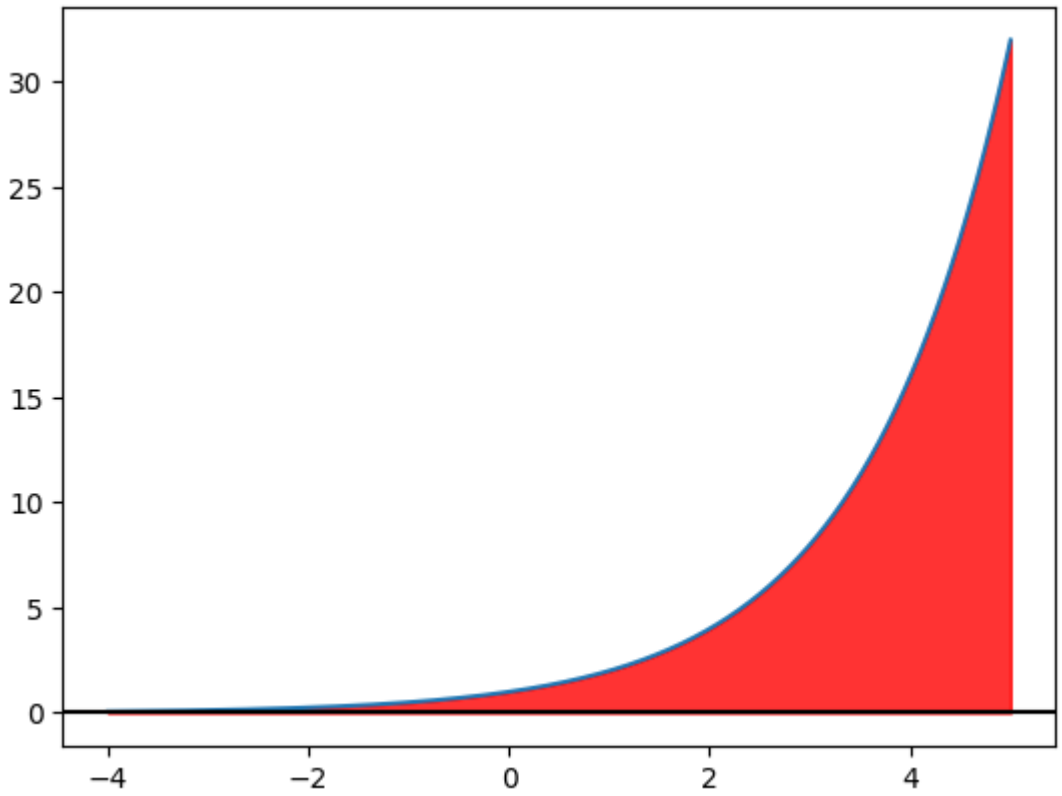
Out[ ]: <matplotlib.collections.PolyCollection at 0x78f5149640>



In [ ]:
```
x = np.linspace(-4,5,1000)
exp1 = 2 ** x
```

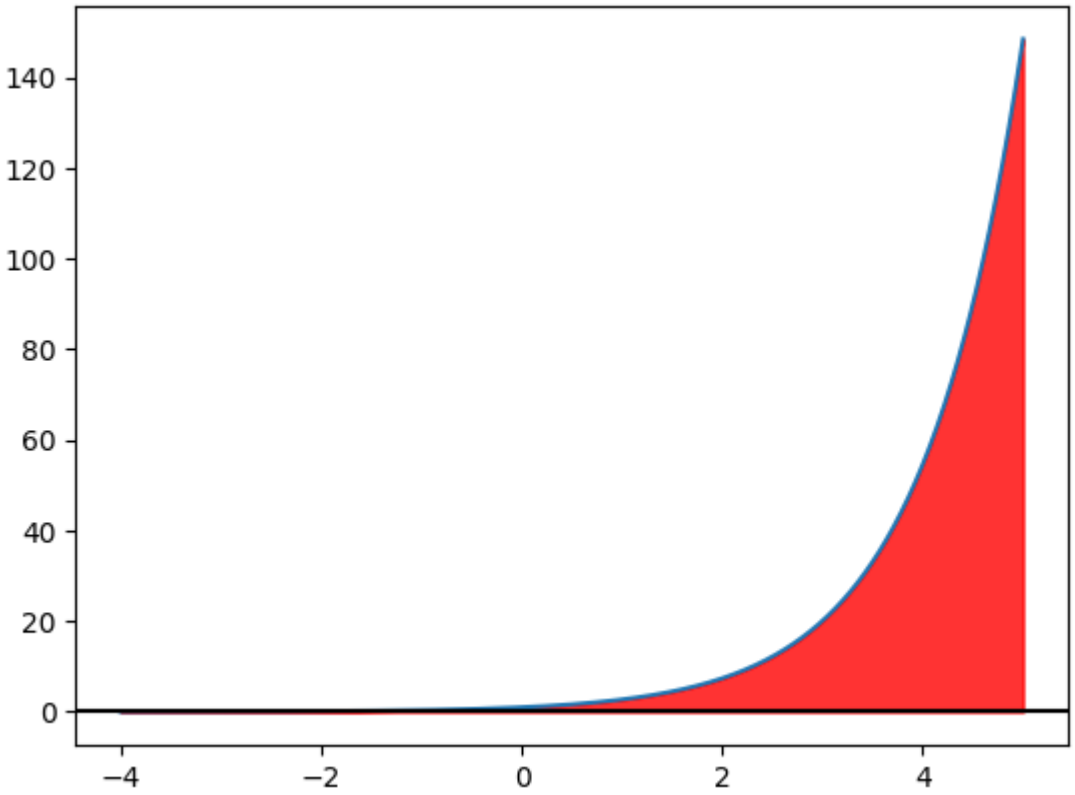
```
plt.plot(x, exp1)
plt.axhline(color = 'black')
plt.fill_between(x, exp1, step = 'pre', color = 'red', alpha = 0.8)
```

Out[ ]: <matplotlib.collections.PolyCollection at 0x78f05de580>



In [ ]:
```
x = np.linspace(-4,5,1000)
exp1 = np.exp(x)
plt.plot(x, exp1)
plt.axhline(color = 'black')
plt.fill_between(x, exp1, step = 'pre', color = 'red', alpha = 0.8)
```

Out[ ]: <matplotlib.collections.PolyCollection at 0x78f0463580>



In [ ]:
```
x = np.linspace(-9,5,1000)
exp1 = x ** -1 + 3 * x
plt.plot(x, exp1)
plt.axhline(color = 'black')
plt.fill_between(x, exp1, step = 'pre', color = 'red', alpha = 0.8)
```

Out[ ]: <matplotlib.collections.PolyCollection at 0x78efa4c130>