In [5]:
```python
##Question2
import numpy as np
import matplotlib.pyplot as plt
import scipy.linalg as la

A=np.array([[2,3,1],[-2,3,-2],[1,-1,4]])
b=np.array([[12],[1],[16]])
x = la.solve(A,b)
print(x)
```

```
[[-1.]
 [ 3.]
 [ 5.]]
```

In [12]:
```python
##Question3 a
from numpy.linalg import matrix_rank
B=np.array([[1,3,1,2,0],[0,0,2,1,3],[0,0,0,3,2],[0,0,0,3,-1]])
matrix_rank(B)
```

Out[12]: 4

In [11]:
```python
C=np.array([[-1,1,0,-1],[-2,2,1,-4],[-1,1,-2,3]])
matrix_rank(C)
```

Out[11]: 2

In [ ]: