# 1.6

December 4, 2024

```python
import numpy as np
# Defining the matrix
def pureQR(matrixInput):
    holderA = matrixInput;
    for n in range(0,5):
        print("Iteration", n + 1,":");
        Q, R = np.linalg.qr(holderA);
        newA = np.matmul(R, Q);
        print(newA);
        holderA = np.round(newA, 2);
    print("The matrix after 5 iteration");
    print(np.round(holderA, 2));

A = np.array(
    [[2, 3],
     [2, 1]]
);
B = np.array(
    [[1, 1],
     [2, 1]]
);
C = np.array(
    [[1, 0, -1],
     [1, 2, 1],
     [-4, 0, 1]]
);
D = np.array(
    [[1, 1, -1],
     [0, 2, 0],
     [-2, 4, 2]]
)
pureQR(A);
```