

MATH 280-01 (122)
MATLAB Assignment 3
Due April 10, 2013

Use the following MATLAB commands to generate the matrices U and V :

```
U= round(20*rand(4))-10  
V= round(10*rand(4))
```

Then use the following commands to generate the following vectors:

```
u1=U(:,1)  
u2=U(:,2)  
u3=U(:,3)  
u4=U(:,4)  
and  
v1=V(:,1)  
v2=V(:,2)  
v3=V(:,3)  
v4=V(:,4)
```

Then let $S = \{u_1, u_2, u_3, u_4\}$ and $T = \{v_1, v_2, v_3, v_4\}$

- Q1. Use MATLAB to verify that both S and T form a basis for \mathbb{R}^4
- Q2. Use MATLAB to compute the transition matrix P from the T-basis to the S-basis.
- Q3. Use MATLAB to compute the transition matrix Q from the S-basis to the T-basis.