

Q1

We have additive uncertainty, and one of our results is that a system with unstructured additive uncertainty is RS $\iff \|W_A K S\|_\infty < 1$. Here W_A is simply the constant 1, so the infinity norm is simply of $K S$ is simply scaled by unity.

```
s = tf('s');
G = [1/(s+1) 2/(s+3); 1/(s+1) 1/(s+1)];
K = eye(2);
S = eye(2)-feedback(G*K,eye(2));
gamma = 1/norm(K*S,'inf')

gamma = 0.8684
```