Q1(a)

```
A = [0 1;3 -2];
B = [0 1;3 0];

% 1-norm
A1 = max(sum(abs(A)))
```

```
A1 = 3
```

```
B1 = max(sum(abs(B)))
```

```
B1 = 3
```

```
% inf-norm
Ainf = max(sum(abs(A')))
```

```
Ainf = 5
```

```
Binf = max(sum(abs(B')))
```

```
Binf = 3
```

```
% frobinius-norm
Afro = sqrt(sum(diag(A'* A)))
```

```
Afro = 3.7417
```

```
Bfro = sqrt(sum(diag(B'* B)))
```

```
Bfro = 3.1623
```

```
% 2-norm
A2 = max(sqrt(eig(A'* A)))
```

```
A2 = 3.6503
```

```
B2 = max(sqrt(eig(B'* B)))
```

```
B2 = 3
```

```
%spectral radius
A_sr = max(abs(eig(A)))
```

```
A_sr = 3
```

```
B_sr = max(abs(eig(B)))
```

```
B_sr = 1.7321
```