

1.  $P = 3$

$$\begin{aligned} N &= \begin{pmatrix} 0 & 3 \\ 3 & \text{Inf} \end{pmatrix} \\ \text{ROC} &= \begin{pmatrix} 0 & 3 \\ 3 & \text{Inf} \end{pmatrix} \\ C &= \begin{pmatrix} 0 \\ 1 \end{pmatrix} \\ S &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \end{aligned}$$

2.  $P = .1$

$$\begin{aligned} N &= \begin{pmatrix} 0 & 0.1000 \\ 0.1000 & \text{Inf} \end{pmatrix} \\ \text{ROC} &= \begin{pmatrix} 0 & 0.1000 \\ 0.1000 & \text{Inf} \end{pmatrix} \\ C &= \begin{pmatrix} 0 \\ 1 \end{pmatrix} \\ S &= \begin{pmatrix} 1 \\ 1 \end{pmatrix} \end{aligned}$$

3.  $P = 0$

$$\begin{aligned} N &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ \text{ROC} &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ C &= \begin{pmatrix} 1 \end{pmatrix} \\ S &= \begin{pmatrix} 1 \end{pmatrix} \end{aligned}$$

4.  $P = [0, .5]$

$$\begin{aligned} N &= \begin{pmatrix} 0 & 0.5000 \\ 0.5000 & \text{Inf} \end{pmatrix} \\ \text{ROC} &= \begin{pmatrix} 0 & 0.5000 \\ 0.5000 & \text{Inf} \end{pmatrix} \\ C &= \begin{pmatrix} 0 \\ 1 \end{pmatrix} \\ S &= \begin{pmatrix} 1 \\ 1 \end{pmatrix} \end{aligned}$$

5.  $P = [2, -.5]$

```
N =
    3

ROC =
    0    0.5000
 0.5000  2.0000
 2.0000    Inf
```

```
C =
    0
    0
    1
```

```
S =
    1
    1
    0
```

6.  $P = [.5 -.5]$

```
N =
    2

ROC =
    0    0.5000
 0.5000    Inf
```

```
C =
    0
    1
```

```
S =
|  1
  1
```

7.  $P = [2 \ 2 \ 2]$

```
N =
    2

ROC =
    0    2
    2    Inf
```

```
C =
    0
    1
```

```
S =
    1
    0
```

8.  $P = [0 \ 1 \ 2]$

```
N =
    3

ROC =
    0    1    2
    1    2    Inf
    2    Inf
```

```
C =
    0
    0
    1
```

```
S =
    1
    0
    0
```

9.  $P = [-.5 \ j]$

```

N =
    3

ROC =
    0      0.5000
 0.5000  1.0000
 1.0000      Inf

C =
    0
    0
    1

S =
    1
    1
    0

```

10.  $P = [0 \ j \ -j]$

```

N =
    2

ROC =
    0      1
    1      Inf

C =
    0
    1

S =
    1
    0

```

11.  $P = [.5, -.5, 2+j, 2-j]$

```

N =
    3

ROC =
    0      0.5000
 0.5000  2.2361
 2.2361      Inf

C =
    0
    0
    1

S =
    1
    1
    0

```

12.  $P = [1+j, 1+2j, 1+3j, 2+j]$

```

N =
    4

ROC =
    0      1.4142      1.4142
 1.4142  2.2361      2.2361
 2.2361  3.1623      3.1623
 3.1623      Inf

C =
    0
    0
    0
    1

S =
    1
    0
    0
    0

```