

Example 4.6

Q check Jury test condition

Solution Jury Stability table

Row	$z^0$	$z^1$	$z^2$	$z^3$
1	0.2	-0.1	-1.1	1
2	1	-1.1	-0.1	0.2
3	-0.96	1.08	-0.12	

$$b_0 = \begin{vmatrix} 0.2 & -0.1 \\ 1 & -1.1 \end{vmatrix} = -0.12$$

$$b_1 = \begin{vmatrix} 0.2 & -1.1 \\ 1 & -0.1 \end{vmatrix} = 1.08$$

不用算

$$b_2 = \begin{vmatrix} 0.2 & 1 \\ 1 & 0.2 \end{vmatrix} = -0.96$$

condition 1.  $|a_3| = 0.2 < 1 = a_1 \Rightarrow OK$ .

$$2. \quad p(1) = 0.2 - 0.1 - 1.1 + 1 = 0 \Rightarrow \text{at least one root at } z=1$$

$$3. \quad p(-1) = -1 - 1.1 + 0.1 + 0.2 = -1.8 < 0 (n=3 \text{ odd})$$

$\Rightarrow OK$

$$4. \quad |b_2| = 0.96 > 0.12 = |b_0| \Rightarrow OK$$

Critically stable