

## **1. Routh-Hurwitz**

**1.1. If a pole exist in left semiplane then it's a unstable system**

**1.2. Poles must appear in even lines for the Routh-Hurwitz**

**1.3. Signal change overwrite every other "minor rule"**

**1.4. Signal change implies pole in right semiplane**

**1.5. Every pole in the imaginary axis must have a counterpart**

→ multiplicity of 2

**1.6. Null line appears only if a polynomial divides another**

→ always appear in odd degree polynomial

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## **2. Poles and stability**

**2.1.1. Every single pole in left semi plane → stable**

**2.1.2. Any pole in imaginary axis with 1 multiplicity → partially stable**

**2.1.3. Any pole in right semi plane/ pole in imaginary axis/ higher multiplicity than 1 → unstable**

### **3. Good practices**

#### **3.1.1. Place every repeatable element in a line**

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