1. # of branches = # of closed loop poles
2. Symmetry: poles appear as complex conjugate pairs
3. real axis segments of the root locus are to the left of an odd number of finite open loop poles and open loop zeros
4. Root locus starts (k=0) at open loop poles and each branch ends on either a finite or infinite zero
5. Behavior at infinity:
   asymptotes have angle $\theta_a = \frac{-(2l+1)\pi}{n-m}$ where n is number of poles and m is number of zeros.

   Real axis intercept = $\frac{\Sigma poles - \Sigma zeros}{n-m}$
6. Break away and Break in location on the real axis satisfy- $\Sigma_1^m \frac{1}{\sigma+z_i} = \Sigma_1^n \frac{1}{\sigma+p_i}$ (note z_i and p_i are *negative* of zero and pole values).
7. $j\omega$ axis crossing: given by Routh-Hurwitz test, or find closed loop pole location p with $Re(p) = 0$ and $\sum \theta = (2l+1)\pi$.
8. Angle of departure from complex pairs: sum of angles $= (2l+1)\pi$
9. Calibration: magnitude of $|G(p)H(p)| = 1/K$ for pole location p.