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LAMPIRAN

Lampiran 1. Syarat Kepositifan Titik Keseimbangan

➤ Untuk solusi keseimbangan N_0 , syaratnya yaitu :

$$1. \quad s_2 < \frac{d_1 d_2}{\rho}$$

➤ Untuk solusi keseimbangan N_1 , syaratnya yaitu :

$$1. \quad a > n\tilde{E} \quad \text{atau} \quad \tilde{E} < \frac{a}{n}.$$

$$2. \quad d_2 > k_2(a - n\tilde{E}) \quad \text{atau} \quad \tilde{E} > \frac{ak_2 - d_2}{nk_2}.$$

$$\text{sehingga diperoleh} \quad \frac{ak_2 - d_2}{nk_2} < \tilde{E} < \frac{a}{n}.$$

Lampiran 2. Penentuan Syarat h_0, h_1, h_2

Misalkan x_0, x_1, x_2 merupakan akar-akar positif dari Pers. (4.33) yaitu $F(y) = y^3 + h_2 y^2 + h_1 y + h_0$ maka dengan menggunakan akar-akar Vieta diperoleh hubungan antar akar-akarnya dengan koefisien dari polinom tersebut yaitu :

1. $x_0, x_1, x_2 = -h_0$. Karena $x_0, x_1, x_2 > 0$ maka $x_0 + x_1 + x_2 > 0$ sehingga diperoleh $-h_0 > 0$ atau $h_0 < 0$.
2. $x_0 x_1 + x_0 x_2 + x_1 x_2 = h_1$. Karena $x_0, x_1, x_2 > 0$ maka hasil perkalian antar dua akarnya juga pasti positif dan ketika dijumlahkan akan bernilai positif. Akibatnya dapat disimpulkan bahwa $h_1 > 0$.
3. $x_0 x_1 x_2 = -h_2$. Karena $x_0, x_1, x_2 > 0$ maka hasil perkalian antar tiga akarnya juga pasti positif dan ketika dijumlahkan akan bernilai positif. Sehingga dapat disimpulkan bahwa $-h_2 > 0$ atau $h_2 < 0$.

