$$L[I] \Rightarrow 0 = X_2(k_2 - sD) - X_1(s^2 m_1 + sD + sr_1 + k_1 + k_2$$

$$L[II] \Rightarrow F(s) = X_2(s^2 m_2 + k_2 + sD + sr_2) + X_1(-k_2 - sD)$$

$$X_1 = \frac{X_2(k_2 - s \cdot D)}{s^2 m_1 + s \cdot D + s r_1 + k_1 + k_2}$$

$$G_1(s) = \frac{X_1}{F(s)} = \frac{\dfrac{X_2(k_2 - s \cdot D)}{s^2 m_1 + sD + sr_1 + k_1 + k_2}}{X_2(s^2 m_2 + k_2 + sD\, sr_2) + X(-k_2 - sD)}$$