$$\Delta AUC = \frac{CP_1 + CP_2}{2} \times (t_2 - t_1)$$

$$\Delta AUC_{last-\infty} = \frac{C_{plast}}{kel}$$

$$kel = \frac{\ln Cp_1 - \ln Cp_2}{t_2 - t_1}$$

$$V = \frac{dose}{Cp^0}$$

$$t_{1/2} = \frac{0.693}{kel}$$

$$CL = kel \cdot V$$

$$ke = \frac{y\text{-intercept(ARE)}}{dose}$$

$$Fe = \frac{ke}{kel}$$

$$kel = km + ke + \dots$$

$$V = \frac{ko}{kel \cdot Cp^D}\left[1 - e^{-kel \cdot D}\right]$$

$$Cp_{calc} = A - e^{-k't}$$

$$Residual = Cp_{calc} - given\ Cp$$

$$\frac{V}{F} = \frac{dose \cdot ka}{A \cdot (ka - kel)}$$

$$Cp = \frac{F \cdot Dose \cdot ka}{V \cdot (ka - kel)} \cdot \left[e^{-kel \cdot t} - e^{-ka \cdot t}\right]$$

$$V = \frac{F \cdot Dose \cdot ka}{A(kel - ka)}$$

$$F = \frac{V \cdot A(kel - ka)}{Dose \cdot ka}$$

$$\frac{F^A}{F^B} = \frac{kel^A \cdot V^A \cdot AUC^A}{Dose^A} \cdot \frac{Dose^B}{kel^B \cdot V^B \cdot AUC^B}$$

$$F = \frac{F^A}{F^B} = \frac{AUC^A}{Dose^A} \cdot \frac{Dose^B}{AUC^B}$$

$$\frac{F^A}{F^B} = \frac{U^{\infty A}}{Fe^A \cdot Dose^A} \cdot \frac{Fe^B \cdot Dose^B}{U^{\infty B}}$$

$$R = \frac{Cpmin}{Cpmax} = e^{-kel \cdot \tau}$$

$$R' = e^{-kel \cdot \tau'}$$

$$LD = V \cdot Cp_{High}$$

$$MD = LD \cdot (1 - R')$$

$$Cpmax(MD) = \left(\frac{n.dose}{V.}\right)\left(\frac{1}{1 - R'}\right)$$

$$Cpmax(LD) = \frac{LDose}{V}$$

$$Cpmin(MD) = \frac{(n.Dose \times R')}{V(1 - R')}$$

$$\overline{Cp} = \frac{Dose \cdot F}{V \cdot kel \cdot \tau}$$

$$Dose = \frac{\overline{CP} \cdot V \cdot kel \cdot \tau}{F}$$

$$Cpmin = \frac{F \cdot Dose}{V} \cdot \left[\frac{e^{-kel \cdot \tau}}{1 - e^{-kel \cdot \tau}}\right]$$

$$Cpmax = \overline{CP} + (\overline{CP} - \overline{CP}_{min})$$

$$CrCl = \frac{Ucr \cdot Vu}{Scr \cdot \Delta t}$$

$$CrCl = \frac{(140 - age) \cdot Wt}{Scr \cdot 72}\ (0.85)$$