Chemical reactions

$$A \underset{k_-}{\overset{k_+}{\rightleftarrows}} B$$

$$\langle \tau_A \rangle = \frac{1}{k_+} \wedge \langle \tau_B \rangle = \frac{1}{k_-}$$

$$K_D = \frac{k_+}{k_-} = \frac{[B]}{[A]} = \frac{p_B}{p_A} \wedge 1 = p_A + p_B$$

$$=> p_B = \frac{k_+}{k_+ + k_-} \wedge p_A = \frac{k_-}{k_+ + k_-}$$

$$\frac{times\_A}{duration} = \frac{p_A \cdot duration}{\langle \tau_A \rangle} \wedge \frac{times\_B}{duration} = \frac{p_B \cdot duration}{\langle \tau_B \rangle}$$

Chemical reactions

$$98 * 100 * 50 = 100 * 2 * ? => ? = 2450$$

$$\langle \tau_A \rangle = \frac{1}{98+2} s \wedge \langle \tau_B \rangle = \frac{1}{100+100} s \wedge \langle \tau_C \rangle = \frac{1}{50+2450} s$$

$$\frac{p_B}{p_A} = \frac{98}{100} \wedge \frac{p_C}{p_B} = \frac{100}{2450} \wedge \frac{p_A}{p_C} = \frac{50}{2} \wedge 1 = p_A + p_B + p_C$$

$$p_A \cdot (1 + \frac{98}{100} + \frac{2}{50}) = 1$$

$$=> p_A = 0.495 \wedge p_B = 0.4851 \wedge p_C = 0.0198$$

$$\frac{times\_x}{duration} = \frac{p_X \cdot duration}{\langle \tau_x \rangle}$$