Assignment 1: Equations

Derivation of K_{m2}

$$v = \frac{V_{max}S_1S_2}{K_{m1}S_2 + K_{m2}S_1 + S_1S_2} \tag{1}$$

$$v(K_{m1}S_2 + K_{m2}S_1 + S_1S_2) = V_{max}S_1S_2 \tag{2}$$

$$K_{m1}S_2 + K_{m2}S_1 + S_1S_2 = \frac{V_{max}S_1S_2}{v} \tag{3}$$

$$K_{m2}S_1 = \frac{V_{max}S_1S_2}{v} - K_{m1}S_2 - S_1S_2 \tag{4}$$

$$K_{m2} = \frac{V_{max}S_2}{v} - \frac{K_{m1}S_2}{S_1} - S_2 \tag{5}$$

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