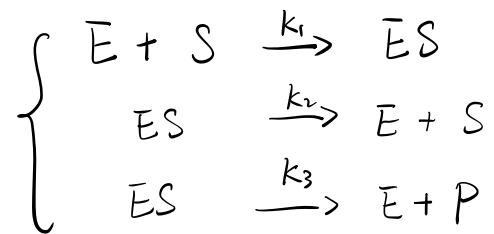


Question 2 : Enzyme kinetics

Answers to 8.1 :

First, 3 basic reactions =



Let $[E]$, $[S]$, $[ES]$, $[P]$ be concentration

$$\textcircled{1} \quad \frac{d[E]}{dt} = -k_1[E][S] + k_2[ES] + k_3[ES]$$

$$\textcircled{2} \quad \frac{d[S]}{dt} = -k_1[S] + k_2[ES]$$

$$\textcircled{3} \quad \frac{d[ES]}{dt} = k_1[E][S] - k_2[ES] - k_3[ES]$$

$$\textcircled{4} \quad \frac{d[P]}{dt} = k_3[ES]$$