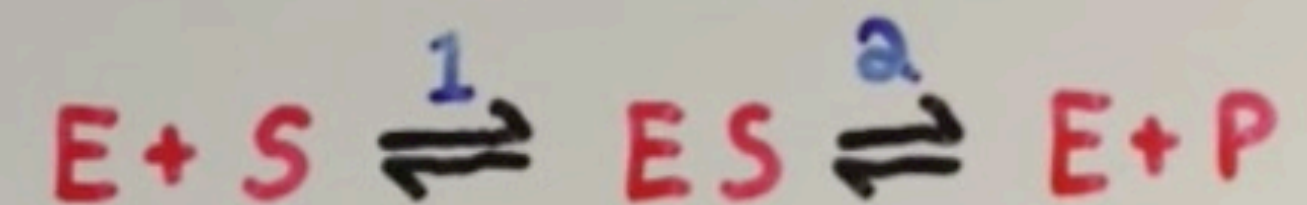


$$\text{RATE} = k [A]$$

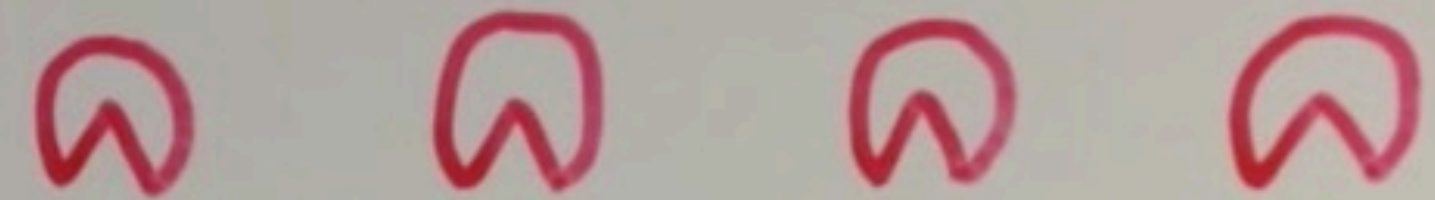


$$\text{RATE}_1 = k_1 [E][S] \quad \text{RATE}_2 = k_2 [ES]$$

$$\text{RATE} = V = \frac{d[P]}{dt} = \frac{\Delta[P]}{\Delta t}$$

↑ RATE → ↑ [S], ↑ [E], K → CONSTANT

LET'S ASSUME THE TOTAL  $[E]$  IS CONSTANT



EACH ENZYME CAN CATALYZE  $10 \text{ RXNS/SEC}$

MAXIMUM RATE =  $40 \text{ RXNS/SEC}$

$V_{\text{MAX}}$

AT HIGH  $[S]$ , THE ENZYMES WILL BE SATURATED

EVEN IF  $\uparrow\uparrow [S]$  THERE WILL STILL BE A  $V_{\text{MAX}}$