

8. 1

$$v_1 = -\frac{\delta [E]}{\delta t} = k_1 [E][S] - k_2 [ES]$$

$$v_2 = -\frac{\delta [S]}{\delta t} = k_1 [E][S] - k_2 [ES]$$

$$v_3 = -\frac{\delta [ES]}{\delta t} = (k_2 + k_3)[ES] - k_1 [E][S]$$

$$v_4 = -\frac{\delta [P]}{\delta t} = -k_3 [ES]$$