

$$\frac{C_a \sum_{i=1}^n i K_{ai} [H^+]^{n-i}}{[H^+]^n + \sum_{i=1}^n K_{ai} [H^+]^{n-i}} + \frac{K_w}{[H^+]} = \frac{K_b C_b [H^+]}{K_w + K_b [H^+]} + [H^+]$$

$$\frac{C_a \sum_{i=1}^n i K_{ai} [H^+]^{n-i}}{[H^+]^n + \sum_{i=1}^n K_{ai} [H^+]^{n-i}} + \frac{K_w}{[H^+]} + \frac{C_c \sum_{i=1}^m i K_{ci} [H^+]^{m-i}}{[H^+]^m + \sum_{i=1}^m K_{ci} [H^+]^{m-i}} = \frac{K_b C_b [H^+]}{K_w + K_b [H^+]} + [H^+]$$