

| | Makes the solution... | |
|---|---|---------|
| Acidic + Neutral | Acidic | |
| Basic + Neutral | Basic | |
| Neutral + Neutral | Neutral | |
| Acidic + Basic | Compare Ka and Kb to determine which "wins" | |
| | $K_{a(\text{ion})} > K_{b(\text{ion})}$ | Acidic |
| | $K_{a(\text{ion})} < K_{b(\text{ion})}$ | Basic |
| | $K_{a(\text{ion})} = K_{b(\text{ion})}$ | Neutral |
| Remember: $K_w = K_a \times K_b$ | | |
| $K_{a(\text{acidic ion})} = \frac{K_w}{K_b \text{ (of where ion came from)}}$ | | |
| $K_{b(\text{basic ion})} = \frac{K_w}{K_a \text{ (of where ion came from)}}$ | | |

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