



Section	Page	I can ...	Red	Amber	Green
5.1	264	Define and provide an example of an <i>Arrhenius acid</i> and an <i>Arrhenius base</i> .	☐	☐	☐
	264	Determine the products of an Arrhenius acid-base reaction.	☐	☐	☐
	265 - 266	Define and provide an example of a <i>Brønsted-Lowry acid</i> and a <i>Brønsted-Lowry base</i> .	☐	☐	☐
	266 - 267	Determine the products of a Brønsted-Lowry acid-base reaction and identify its <i>conjugate acid-base pairs</i> .	☐	☐	☐
	267	Determine a Brønsted-Lowry acid's conjugate base (and vice-versa).	☐	☐	☐
	268	Define and provide an example of an <i>amphiprotic</i> species.	☐	☐	☐
5.2	273 - 274	Define and provide an example of a <i>strong acid</i> and a <i>weak acid</i> .	☐	☐	☐
	274	Define and provide an example of a <i>strong Brønsted-Lowry base</i> and a <i>weak Brønsted-Lowry base</i> .	☐	☐	☐
	275	Write the <i>acid ionization equation</i> and the <i>acid ionization expression</i> for any given acid.	☐	☐	☐
	276	Write the <i>base ionization equation</i> and the <i>base ionization expression</i> for any given base.	☐	☐	☐
	277	Find the K_a value of an acid in the K_a table.	☐	☐	☐
	277 - 278	Relate the strength of an acid to the strength of its conjugate base and vice-versa.	☐	☐	☐
	279	Describe and explain periodic trends in <i>binary acid</i> strength.	☐	☐	☐
	280	Cite two factors that influence the strength of <i>ternary acids</i> .	☐	☐	☐
	280	Cite two factors that influence the strength of <i>carboxylic acids</i> .	☐	☐	☐
	282 - 283	Determine whether the forward or reverse reaction is favoured in any <i>Brønsted-Lowry acid-base equilibrium</i> .	☐	☐	☐
5.3	284	Describe the <i>levelling effect</i> .	☐	☐	☐
	289	Provide the chemical equation for the <i>autoionization</i> of water, the K_w expression and the value of K_w at room temp.	☐	☐	☐
	290	Define <i>acidic</i> , <i>basic</i> , and <i>neutral</i> in terms of the relative concentrations of H^+ and OH^- .	☐	☐	☐
	291	Calculate the $[H^+]$ and $[OH^-]$ in strong acid and strong base solutions.	☐	☐	☐
	292	Calculate the $[H^+]$ and $[OH^-]$ that result from mixing particular amounts of a strong acid and a strong base.	☐	☐	☐



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5.4	296 - 297	Calculate a solution's pH from its $[H^+]$, taking care to express the pH to the appropriate number of sig.figs.	☐	☐	☐
	297	Cite two ways to measure a solution's pH .	☐	☐	☐
	298	Calculate a solution's $[H^+]$ from its pH , taking care to express the $[H^+]$ to the appropriate number of sig.figs.	☐	☐	☐
	299 - 302	Interconvert $[H^+]$, $[OH^-]$, pH and pOH .	☐	☐	☐
	300 - 301	Identify an aqueous solution at room temperature as being acidic, basic (alkaline), or neutral, from its pH or its pOH .	☐	☐	☐
	303 - 305	Calculate the pH and pOH that result from mixing particular amounts of a strong acid and a strong base.	☐	☐	☐
5.5	312 - 314	Calculate an acid solution's $[H^+]$ from the acid's K_a and the (initial) [acid].	☐	☐	☐
	315 - 316	Calculate an acid solution's concentration from the acid's K_a and the solution's pH .	☐	☐	☐
	317	Calculate an acid's K_a from the acid solution's concentration and its pH .	☐	☐	☐
	318	Calculate the K_b of a base from the K_a of its conjugate acid and K_w .	☐	☐	☐
	319 - 320	Calculate a base solution's $[OH^-]$ from the base's K_b and the (initial) [base].	☐	☐	☐
	321 - 322	Calculate a base solution's concentration from the base's K_b and the solution's pH .	☐	☐	☐
	323	Calculate a base's K_b from the base solution's concentration and its pH .	☐	☐	☐