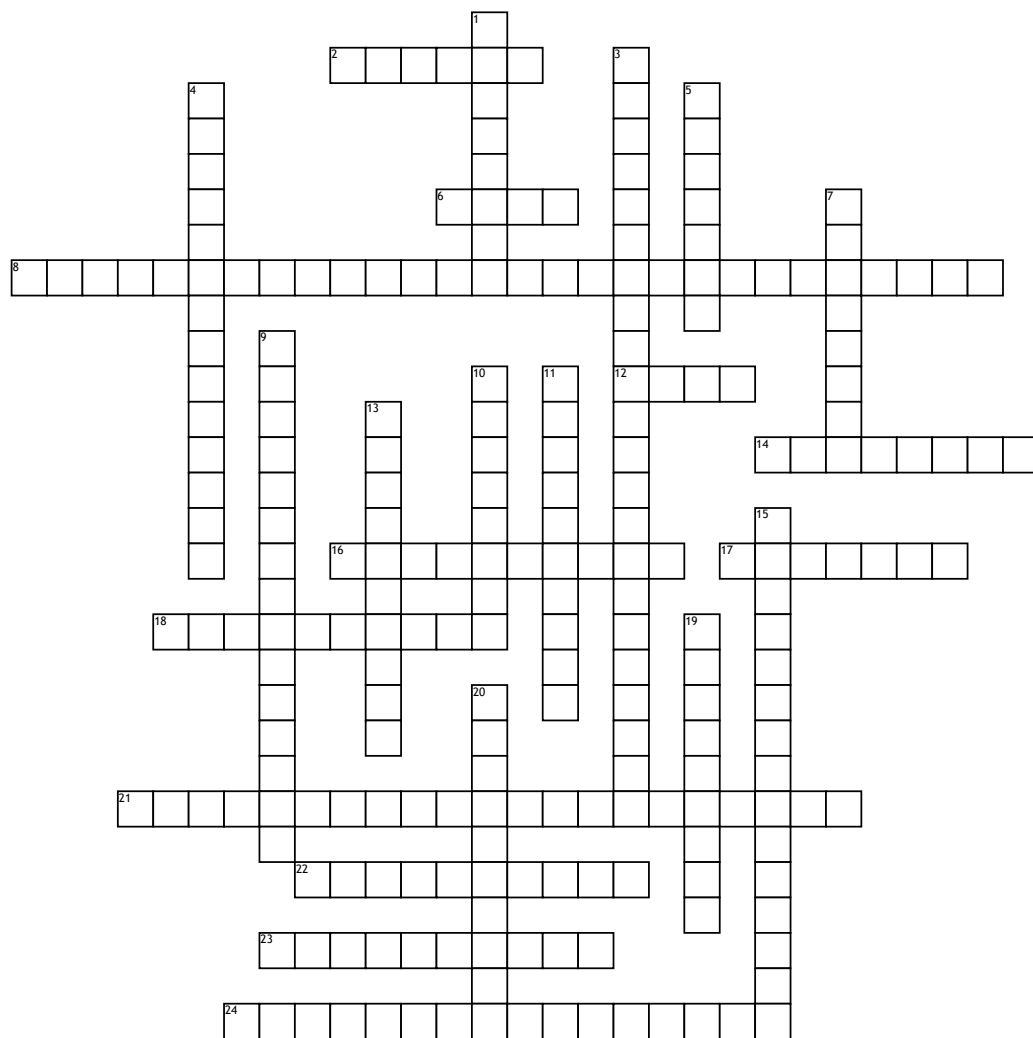


Name: _____

Date: _____

Neutralization Crossword Puzzle



Across

2. A solution where the pH is constant when small amounts of acid or base is added
 6. Substance that ionizes in water and produces hydroxide ions
 8. $\text{pH} = \text{pK}_a + \log \frac{[\text{A}^-]}{[\text{HA}]}$
 12. Substance that ionizes in water and produces hydrogen ions
 14. Point in titration when neutralization is achieved
 16. A weak acid which changes color in certain pH ranges due to Le Chatelier's principle
 17. $\text{pH} =$

18. Dissociates completely in water and reaction goes to completion
 21. Measures of the strengths of weak acids and bases
 22. $\text{pH} = 12-14$
 23. Conjugate of a weak base
 24. Point in titration when there are equal amounts of acid and base

Down

1. Conjugate of a strong acid
 3. A reaction where an acid and base react in water to form water and a salt
 4. Some acid that can give up more than one hydrogen ion in a solution
 5. $\text{pOH} =$

7. When a _____ is placed in water, a small amount of its molecules dissociate into hydrogen ions and conjugate base ions
 9. $\text{pH} = 7$

10. Conjugate of a strong base
 11. A substance that can act as an acid or a base
 13. $\text{pH} = 0-3$
 15. A weak acid and its conjugate base remain in a solution together without neutralizing each other
 19. A solution of known concentration is added to a solution of unknown concentration until the indicator signals the endpoint
 20. Conjugate of a weak acid

Word Bank

Titration	Acid	Weak acid	Neutral solution
Weak base	Dissociation constants	$-\log[\text{H}^+]$	$-\log[\text{OH}^-]$
Strong acid	Common ion effect	Amphoteric	Indicators
Henderson - Hasselbalch Equation	Equivalence point	Polyprotic acid	End point
Weak acid	Strong base	Base	Buffer
Strong base	Neutralization reaction	Strong acid	Strong acid