Na	ıme:		<u></u>		Period: _	Page:				
	Д	cids/E	Bases & p	H W	orksheet					
PR	OPERTIES OF ACIDS AND BASES	;								
2.	Acids turn litmus paper	, bases turn litmus paper _			, bases also feel and phenolphthalein ctrolyte is a <u>poor / good</u> conductor of					
RE	ACTIONS OF ACIDS AND BASES									
4.	The definitions of a Brønsted-I	owry acid	is:							
Ide	entify the Brønsted-Lowry Acid 8	ኔ Base, an	d also the <u>conj</u> i	ugate a	<u>cid</u> and <u>conjuga</u>	te base in each reaction:				
5.	$NH_3(g)$ + $H_2O(1)$	⇄	NH_4^+ (aq)	+	OH ⁻ (aq)					
6.	$HClO_3(aq) + H_2O(1)$	₹	$H_3O^+(aq)$	+	ClO ₃ ⁻ (aq)					
7.	$HF(aq)$ + $HSO_3^-(aq)$	- q)	F ⁻ (aq)	+	$H_2SO_3(aq)$					
8.	The product of an Arrhenius a	– cid and ba	se neutralization	on are a	 a/an	and				
Со	implete and balance the following	ng reactior	ns:							
9.	HBr +	NaOH	→		+ _					
10	$H_2SO_4 + $	_ KOH	→		+					
11	11. $\underline{\hspace{1cm}}$ HCl + $\underline{\hspace{1cm}}$ Ca(OH) ₂ \rightarrow $\underline{\hspace{1cm}}$ + $\underline{\hspace{1cm}}$									
12	Fe(OH) ₃ + _	H ₂ \$	SO ₄ → _			+				
NA	AMING ACIDS & BASES:									
13	. What is the correct formula fo	or nitrous a	acid?			<u></u>				
14. What is the correct formula for hydrobromic acid?										
15	15. What is the correct name for H₃PO₃?									
16	16. What is the correct name for HNO₃?									
17	17. What is the correct formula for bromic acid?									
18	18. What is the correct name for H ₂ SO ₄ ?									
19	19. What is the formula for aluminum hydroxide?									
20	20. What is the correct name for Sr(OH) ₂ ?									
21	21. What is the correct name for Cu(OH)₂?									
22	22. What is the formula for iron (III) hydroxide?									

Acids/Bases & pH Worksheet (continued)

Complete the following table by filling in the empty spaces. Indicate if the solution is acidic, basic or neutral.

You should be able to do the starred (*) items without a calculator. (Problem #23-34)

[H ₃ O] ⁺	[OH] ⁻	pН	рОН	Acidic/Basic/Neutral
2.35×10^{-3}				
	4.93×10^{-8}			
		8.320		
			10.270	
3.72×10^{-10}				
	$*1.00 \times 10^{-7}$			
		2.580		
			5.260	
$*1.00 \times 10^{-3}$				
	4.27×10^{-2}			
		*8.000		
			2.040	

Complete the following problems which require more than a single step. **SHOW YOUR WORK & STEPS**

- 35. Given a solution with a hydroxide ion concentration, $[OH^{-}] = 2.73 \times 10^{-5}$, what is the pH?
- 36. A solution is found to have a pH of 8.3. What is the hydroxide ion, [OH⁻], concentration?
- 37. The measured pOH of a solution is 5.5. What is the hydrogen ion, [H⁺], concentration?

BONUS QUESTION: (all work above must be complete before attempting the bonus)

You are stuck with a problem. You need to measure pH of a solution known to be made from a metal hydroxide, but you don't have a meter or any indicators. You do happen to have some lead (II) nitrate that is soluble, and you remember that lead (II) hydroxide is insoluble. You add some to 1 liter of your unknown solution and a precipitate forms. You add more until the precipitate stops forming and then a bit more just in case. After you filter and dry the precipitate, you have 3.81 grams of it. What was the approximate pH of the original solution? SHOW YOUR STEPS AND YOUR WORK. EXPLAIN EACH STEP SO I KNOW WHAT YOU DID.