Period Date / /

Acids & Bases

	PRACTICE QUESTIONS	
Describe these household substances:	13. When an acid and a base react, the products	
a) acidic	are	
b) basic	a) salt and water c) base and acid	
c) neutral	b) salt and base d) water and acid	
1. Sugar water		
2. Vinegar	14. When NaOH is mixed with H ₂ SO ₄ , one of the	
3. Rubbing Alcohol	products is	
4. Milk of Magnesia	a) NaSO ₄ c) H ₂	
5. Household ammonia	b) H ₂ OH d) Na ₂ SO ₄	
Questions 6 - 10	15. A property of acids are that they	
Match the household chemical with its formula	a) taste sour c) feel slippery	
6. Vinegar a) NaOH	b) taste bitter d) neutralize water	
7. Pool Acid b) NaHCO ₃		
8. Rubbing Alcohol c) HCl	16. How many grams of sodium hydroxide	
$_{-}$ 9. Drano d) $HC_2H_3O_2$	pellets, NaOH, are required to prepare 50.0	
10. Baking Soda e) C ₃ H ₇ OH	mL of a 0.150 M solution?	
	a) 0.300 c) 3.00	
	b) 2.00 d) 200.	
11. A substance that turns cabbage juice blue and		
only slightly lights up a light bulb is a:	17. A common laundry bleach is 0.700 M sodium	
a) strong acid c) weak acid	hypochlorite, NaOCl. Which one of the following	
b) strong base d) weak base	statements is true?	
	a) NaOCl is the solvent.	
12. Which of the following substances is a base?	b) The solution can be made by mixing	
a) H_2O c) $Ca(OH)_2$	0.700 moles of NaOCl with 1.00 liter of	
b) $HC_2H_3O_2$ d) H_2SO_4	water.	
	c) A 0.500 Liter sample of bleach would	
	contain 0.350 moles of NaOCl.	
	d) Each of these statements is true.	
	18. What is the hydrogen ion concentration,	
	filled after and of the first of the second	

[H+], of a solution in which the pH is 5? a) $5 \times 10^2 \, \underline{M}$ c) $5 \times 10^{-1} \, \underline{M}$

- b) $1 \times 10^{5} \underline{M}$ d) $1 \times 10^{-5} \underline{M}$

19.	When an acid is added to a solution of a base,				
	wh	what change in pH of the solution could be			
		observed?			
	a)	An increase	e from 7 t	o 8	
	b)	An increase	An increase from 3 to 8		
	c)	c) A decrease from 7 to 6			
	d)	A decrease	from 9 to	5	
20.	W	What is the pH of 0.001 M HCl, assuming			
	complete ionization?				
	a)	1	c)	3	
	b)	2	d)	4	
Consider the household product:					
Vinegar, HC ₂ H ₃ O ₂					
21.	21. Is it an acid or a base?				
22.	2. Circle the portion of the formula that makes				
	it an acid or a base.				
23.	Wr	rite an equation that shows why it is an			
		•	TOIL CHUC 5	nows willy it is all	
		d or a base.			
	aci	d or a base.	(dissocia		
	aci	d or a base.	(dissocia	tion)	
24.	acid Thi	d or a base. s substance (ac	is a	tion)(weak/strong)	
24.	Thi	d or a base. s substance (according to be a substance)	is a id/base).	tion)	
24.	Thi A s	d or a base. s substance (ac	is a id/base). an [H+] =	tion) (weak/strong) = 0.000100 <u>M</u> . What	
24.	Thi A s is tl a)	d or a base. s substance (according to be a colution has a colutio	is a iid/base). an [H+] = 	tion)(weak/strong)	
24.25.	Thi A s is tl a) b)	d or a base. s substance (accolution has a he [OH-]? 1 x 10-3 1 x 10-4	(dissocia is a id/base). an [H+] = c) d)	(weak/strong) 0.000100 M. What 1 x 10-14 1 x 10-10	
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Questions 29 - 31 refer to the following data collected in a titration experiment.

Titration Data:		
molarity of base	0.185 <u>M</u>	
final volume of acid	22.75 mL	
initial volume of acid	12.75 mL	
final volume of base	25.25 mL	
initial volume of base	3.50 mL	

Calculate the concentration of the acid. Show all work including:

- 29. the mathematical formula used
- 30. values substituted into the formula
- 31. units on all numbers, and a box around the answer.