

Name _____

Date _____

**Applying
Knowledge****Section 5.1**

Use with textbook pages 220–229.

Acids versus bases

1. Compare and contrast acids and bases by completing the following table.

	Acids	Bases
definition		
pH		
what to look for in chemical formula		
production of ions		
electrical conductivity		
taste		
touch		
examples		

2. Classify each of the following as an acid or a base.

(a) H_3PO_4 _____(b) NH_4OH _____(c) $\text{Mg}(\text{OH})_2$ _____

(d) has a pH of 4 _____

(e) has a pH of 9 _____

(f) sulphurous acid _____

(g) hydrogen bromide _____

(h) potassium hydroxide _____

(i) causes methyl orange to turn red _____

(j) causes phenolphthalein to turn pink _____

(k) causes indigo carmine to turn yellow _____

(l) causes bromothymol blue to turn yellow _____

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Comprehension

Section 5.2

Use with textbook pages 234–239.

Recognizing acids, bases, and salts

1. State whether each of the following is an acid, a base, or a salt.

- | | |
|----------------------|-------------------------------|
| (a) HI _____ | (l) $Al_2(SO_4)_3$ _____ |
| (b) HBr _____ | (m) CH_3COOH _____ |
| (c) KOH _____ | (n) $Mg(CH_3COO)_2$ _____ |
| (d) HNO_3 _____ | (o) calcium nitrate _____ |
| (e) NaOH _____ | (p) sodium chloride _____ |
| (f) H_2SO_4 _____ | (q) hydrocyanic acid _____ |
| (g) H_2CO_3 _____ | (r) hydrogen fluoride _____ |
| (h) H_3PO_4 _____ | (s) barium hydroxide _____ |
| (i) Na_3PO_4 _____ | (t) hypochlorous acid _____ |
| (j) $Sr(OH)_2$ _____ | (u) aluminum hydroxide _____ |
| (k) $Ca(OH)_2$ _____ | (v) magnesium carbonate _____ |

2. What acid is present in vinegar? _____

3. What is the chemical name for table salt? _____

4. What acid is used in automobile batteries? _____

5. What base is found in drain and oven cleaners? _____

6. What base is the active ingredient in some antacids? _____

7. What acid is produced in the stomach to help digest food? _____