Suggested Homework:

Key Concepts on p. 424 #1, 2, 7, 8
Exercises: 1, 3, 5, 7, 9, 11, 13, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 87

Learning Goals:

1. Know properties of acids and bases
2. Know definition of Arrhenius acids and bases.
3. Be able to identify strong and weak Arrhenius acids (Know 6 strong acids)
4. Be able to identify strong and weak Arrhenius bases
5. Recognize and be able to predict products for neutralization reactions
6. Know definition of Bronsted Lowry acids and bases (know as applied to water)
7. Know in general that an acid-base indicator turns various colors for certain pHs (i.e. cabbage juice)
8. Omit Sec. 15.5 and 15.6
9. Know value of water constant, $K_w$
10. Be able to calculate the $[H^+]$ if given the $[OH^-]$ (or visa versa)
11. Know difference between strong conductor and weak conductor
12. Be able to predict if a substance is a strong or weak conductor
13. Know pH scale. What ranges are acidic, neutral or basic
14. Be able to determine pH from $[H^+]$ (or visa versa)
15. Omit Sec. 15.11

Extra-Practice

<table>
<thead>
<tr>
<th>pH</th>
<th>$[H^+]$</th>
<th>$[OH^-]$</th>
<th>acidic, basic or neutral?</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.00</td>
<td>1 x 10^{-13}</td>
<td>1 x 10^{-9}</td>
<td></td>
</tr>
<tr>
<td>5.92</td>
<td>1 x 10^{-7}</td>
<td>8.32 x 10^{-1}</td>
<td></td>
</tr>
<tr>
<td>8.29</td>
<td>5.19 x 10^{5}</td>
<td>8.32 x 10^{1}</td>
<td></td>
</tr>
</tbody>
</table>

Answers (left to right starting at top of table): 1x10^{-3}, 1 x 10^{-11}, acidic; 13.00, 1 x 10^{-1}, basic; 5.00, 1 x 10^{-5}, acidic; 7.00, 1 x 10^{-7}, neutral; 1.26 x 10^{6}, 7.94 x 10^{9}, acidic; 4.28, 1.93 x 10^{10}, acidic; 13.92, 1.20x10^{14}, basic; 5.13x10^{9}, 1.95x10^{6}, basic.