The relationship between pH and hydrogen ion concentration
The Relationship Between pH and Hydrogen Ion Concentration

<table>
<thead>
<tr>
<th>“Acidic”</th>
<th>“Neutral”</th>
<th>“Basic”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher [H+]</td>
<td>Lower [H+]</td>
<td></td>
</tr>
<tr>
<td>10^{-1} M</td>
<td>10^{-7} M</td>
<td>10^{-14} M</td>
</tr>
</tbody>
</table>

pH: 1 7 14

This slide emphasizes the following points:
• Acidic solutions have a relatively high [H+]  
• As pH increases, [H+] decreases
Sample question 1

Which of the following lists the above solutions in order of increasing hydrogen ion concentration?

I. B, A, C
II. C, A, B
III. A, B, C
Answer to sample question 1

Which of the following lists the above solutions in order of **increasing** hydrogen ion concentration?

I. B, A, C
II. **C, A, B is the correct answer as shown above**
III. A, B, C
Sample question 2

Which of the following lists the above solutions in order of increasing pH?

I. B, A, C
II. C, A, B
III. A, B, C
Which of the following lists the above solutions in order of increasing pH?

I. B, A, C is the correct answer as shown above. Note that the higher the hydrogen ion concentration, the lower the pH!!!!

II. C, A, B

III. A, B, C