

TEACHING TRANSPARENCY WORKSHEET

The pH Scale

**Use with Chapter 18,
Section 18.3**

1. What is the pH of a solution with a $[H^+]$ of 10^{-8} ? _____
2. What is the pOH of a solution with a $[OH^-]$ of 10^{-11} ? _____
3. What is the pH of a solution that has a $[OH^-]$ of 10^{-2} ? _____
4. What is the pOH of a solution that has a $[H^+]$ of 10^{-5} ? _____
5. What do you notice about the product of $[H^+]$ and $[OH^-]$ for any aqueous solution?

6. What do you notice about the sum of pH and pOH for any aqueous solution?

7. Which is more acidic, a solution with a pH of 6 or one with a pH of 9?

8. Which is more basic, a solution with a pOH of 7 or one with a pOH of 12?

9. Which is more acidic, a solution with a pH of 5 or one with a pOH of 10?

10. Which is more basic, a solution with a pH of 8 or one with a pOH of 12?

11. Stomach contents can have a pH of 3. Are stomach contents acidic, basic, or neutral?

12. Pure water has a pOH of 7. Is pure water acidic, basic, or neutral?

13. Normal rain has a pH of approximately 6. Is normal rain strongly acidic, slightly acidic, neutral, slightly basic, or strongly basic?

14. Acid precipitation is often a problem in industrialized areas. What might you expect the pH of acid rain to be?
