

10.6

Writing Scientific Notation

For use with Activity 10.6

Essential Question How can you write a number in scientific notation?

1 ACTIVITY: Finding pH Levels

Work with a partner. In chemistry, pH is a measure of the activity of dissolved hydrogen ions (H^+). Liquids with low pH values are called *acids*. Liquids with high pH values are called *bases*.

Find the pH of each liquid. Is the liquid a base, neutral, or an acid?

- a. Lime juice: $[H^+] = 0.01$

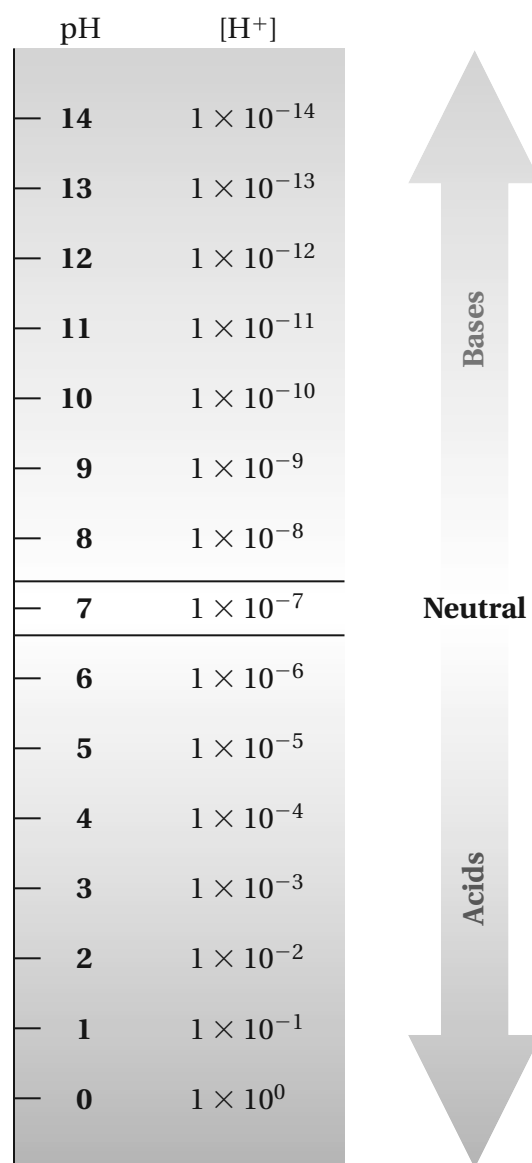
- b. Egg: $[H^+] = 0.00000001$

- c. Distilled water: $[H^+] = 0.0000001$

- d. Ammonia water:
 $[H^+] = 0.00000000001$

- e. Tomato juice: $[H^+] = 0.0001$

- f. Hydrochloric acid: $[H^+] = 1$



10.6 Writing Scientific Notation (continued)**2 ACTIVITY:** Writing Scientific Notation

Work with a partner. Match each planet with its distance from the Sun. Then write each distance in scientific notation. Do you think it is easier to match the distances when they are written in standard form or in scientific notation? Explain.

- a. 1,800,000,000 miles
- b. 67,000,000 miles
- c. 890,000,000 miles
- d. 93,000,000 miles
- e. 140,000,000 miles
- f. 2,800,000,000 miles
- g. 480,000,000 miles
- h. 36,000,000 miles

