STUDY LINK **7+3**

Interpreting Scientific Notation



Scientific notation is a short way to represent large and small numbers. In scientific notation, a number is written as the product of two factors. One factor is a whole number or a decimal. The other factor is a power of 10.



Scientific notation: 4 * 104

Meaning: Multiply 10⁴ (10,000) by 4.

$$4 * 10^4 = 4 * 10,000 = 40,000$$

Number-and-word notation: 40 thousand

Scientific notation: 6 * 10⁶

Meaning: Multiply 10⁶ (1,000,000) by 6.

$$6 * 10^6 = 6 * 1,000,000 = 6,000,000$$

Number-and-word notation: 6 million

Guides for Powers of 10	
10 ³	one thousand
10 ⁶	one million
10 ⁹	one billion
10 ¹²	one trillion

Complete the following statements.

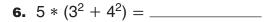
1. The area of Alaska is about 6 * 10⁵, or _____ thousand, square miles.

The area of the lower 48 states is about 3 * 10⁶, or _____ million, square miles.

- **2.** There are about $6 * 10^9$, or ______ billion, people in the world.
- **3.** It is estimated that about $5 * 10^8$, or ______, people speak English as their first or second language.
- **4.** In Bengal, India, and Bangladesh there are about 2.6 * 10⁸, or ______, people who speak Bengali.
- **5.** At least 1 person in each of 1 * 10⁷ households, or ______, watches the most popular TV shows.

Source: The World Almanac and Book of Facts, 2000

Practice





8.
$$2*(9+h)=20$$

9.
$$g = (7^2 - 2^2)$$