**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_**

**Practice with Scientific Notation**

**Section 1: Converting from Standard Form to Scientific Notation**

1. 456, 000,000,000 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. 0.0000000000456 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 3. 5,900,000,000,000 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. 0.000000672 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 5. The distance that light travels in one year 5,900,000,000,000 miles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 6. The mass of the earth 6,020,000,000,000,000,000,000,000kg \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 7. The wavelength of one type of x ray 0.000000000128m \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 8. The mass of an electron 0.000000000000000000000000091g \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Section 2: Converting from Scientific Notation to Standard Form**

 9. 4.475 x 105 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 10. 1.352 x 10-5\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 11. 9.1 x 1010 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 12. 2.3 x 10-3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Section 3: Multiplying and Dividing with Scientific Notation**





**Section 4: Word Problems with Scientific Notation**

The mass of one hydrogen atom is 1.67 x 10-27 kg. A cylinder contains 3.01 x 1023 hydrogen atoms. What is the total mass of the hydrogen?

The average distance from Earth to the sun is 1.5 x 1011 m. The speed of light is 3 x 108 m/s. Approximately how long does it take for light to travel from the sun to Earth?

**Section 5: Comparing numbers in Scientific Notation**

The half-life of uranium-238 is 4.5 x 109 years. The half-life of uranium-234 is 2.5 x 105 years. How many times greater is the half-life of uranium-238 than that of uranium-234?

The state of Colorado covers about 1.04 x 105 square miles. The Indian Ocean covers about 2.808 x 107 square miles. How many times bigger than Colorado is the Indian Ocean?