Math 8   Name_____

Test Review   Date_____

Write each number in scientific notation.

1) 0.00183   2) 250000

Write each number in standard notation.

3) 4.53×10^{-3} 4) 1.9×10^{4}

Simplify. Write each answer in scientific notation.

5) $\left(3.5 \times 10^{4}\right)\left(9.5 \times 10^{-6}\right)$ 6) $\dfrac{8.78 \times 10^{4}}{2.5 \times 10^{-5}}$

7) $(2.5 \times 10^{4}) - (1.5 \times 10^{3})$ 8) $(1.43 \times 10^{2}) + (7.105 \times 10^{5})$

9) China's population was made up of 5.1×10^{7} people and America's population was 3.9×10^{6} people in 2008. How much larger was the population of China in 2008?

10) The mass of the Sun is 1.989×10^{30} kilograms. The mass of the Earth is 5.98×10^{24} kilograms. How many times larger is the Sun than the Earth?

11) There are approximately 3.1×10^{8} people in the United States. If on average each person has 4.1×10^{1} coins lying around on dressers, in pockets, in cars, etc., how many total coins do all the people in the U.S. have?

12) In 2006, China had 1.311×10^{8} internet users. That same year, Japan had 9.09×10^{7} internet users. How many internet users did the two countries have combined? ?

13) One day Phayon and Otto were discussing the range on their new bluetooth earbuds. On the box of Phayon's earbuds it said the bluetooth range was 50 yards while Otto's earbuds have a range of 450 inches.

a) Rewrite the range of each set of earbuds in inches using scientific notation and state which has a greater range (36 inches = 1 yard).

b) Determine how many times greater the one range is by writing and solving a ratio that compares the range of Phayon's earbuds to the range of Otto's.

c) Johnya bought the latest pair of wireless earbuds that have a range of 200 yards. Write and find the value of the ratio that compares the range of Otto's earbuds to Johnya's.