

Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

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### Pre-Algebra: Scientific Notation Operations #3 (page 1)

**COMPLETE WORK ON SEPARATE PIECE OF PAPER OR NO CREDIT. Write final answer on blank space. Fill in the blank to make the statement true.**

1.  $9 \times 10^{10}$  is \_\_\_\_\_ times larger than  $3 \times 10^7$
2.  $4 \times 10^{-12}$  is \_\_\_\_\_ times larger than  $4 \times 10^{-8}$
3. In 2009, the population of the United States was estimated as  $3.07 \times 10^8$  people. The population of Maryland was estimated as  $5.7 \times 10^6$ . About how many times greater is the population of the U.S. than the population of Maryland?

**Perform the indicated operations. Write answers in CORRECT scientific notation.**

4.  $(3.2 \times 10^5) + (4.9 \times 10^8)$  4. \_\_\_\_\_
5.  $(2.3 \times 10^8) - (2.12 \times 10^3)$  5. \_\_\_\_\_
6. In 2009, the population of the California was estimated as  $3.69 \times 10^7$  people. The population of Florida was estimated as  $1.8 \times 10^6$ . What was the total for these two states?

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7.  $(1.8 \times 10^9) \times (6.78 \times 10^{12})$  7. \_\_\_\_\_

8. A newborn baby has about 26,000,000,000 cells. An adult has about  $1.9 \times 10^3$  times as many cells as a newborn. About how many cells does an adult have?  
Write your answer in scientific notation. 8. \_\_\_\_\_

9.  $\frac{3.46 \times 10^{21}}{2 \times 10^9}$  9. \_\_\_\_\_

10. Astronomers estimate that the diameter of the Andromeda galaxy is approximately  $2.2 \times 10^5$  light-years. A light-year is the distance light travels in a vacuum in 1 year. One light-year is approximately  $5.9 \times 10^{12}$  miles. What is the diameter of the Andromeda galaxy in miles? Write your answer in scientific notation

10. \_\_\_\_\_

Answer in Calculator Scientific Notation.

11.  $(4.1 \text{ E } 9) + (7.28 \text{ E } 8)$  11. \_\_\_\_\_

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