Name _____ Date _____

Operations with Scientific Notation: Converting, Multiplying, Dividing and Adding

Directions: Answer each question. Type number answers with digits only, with no commas.

1. Which shows 0.00062 written in scientific notation?

A. 6.2×10^{-3} B. 6.2×10^{-4} C. 62×10^{-5} D. 6.2×10^{4}

2. A calculator shows the result 3.06E5, which is how it displays 3.06×10^{5}. Write the number in standard form. Type it with no commas.

_____

3. $(3 \times 10^{4}) \times (2.5 \times 10^{3}) = 7.5 \times 10^{n}$. What is n?

_____

4. Multiply $(4 \times 10^{5}) \times (6 \times 10^{3})$. Which choice is the product written in scientific notation?

A. 2.4×10^{15} B. 2.4×10^{8} C. 24×10^{8} D. 2.4×10^{9}

5. A phone plan includes 1.2×10^{10} bytes of data each month. Each song download uses 4×10^{6} bytes. How many song downloads would use exactly all of the month's data? Type the number with no commas.

_____ songs

6. What is $(6.4 \times 10^{5}) + (3.6 \times 10^{4})$ written in scientific notation?

A. 1.0×10^{6} B. 6.76×10^{4} C. 1.0×10^{10} D. 6.76×10^{5}

7. A grain of sand measured in a lab is 5×10^{-4} meters long. A bacterium in the same lab is 2×10^{-6} meters long. How many times as long as the bacterium is the grain of sand?

_____ times

8. Noah found $(9 \times 10^{8}) \div (3 \times 10^{-2})$. His work is shown.

1. $9 \div 3 = 3$
2. $10^{8} \div 10^{-2} = 10^{6}$
3. The quotient is 3×10^{6}.

Which step has the first mistake?

A. $10^{8} \div 10^{-2} = 10^{6}$ B. $9 \div 3 = 3$

C. There is no mistake. D. The quotient is 3×10^{6}.