Review for Mastery: Scientific Notation

Standard Notation	Scientific Notation	
	(1st factor is between 1 and 10.)	(2nd factor is an integer power of 10.)
430,000	4.3×10^5	positive integer for large number
0.0000057	5.7×10^{-6}	negative integer for small number

To convert from scientific notation, look at the power of 10 to tell how many places and which way to move the decimal point.

Complete to write each in standard notation.

	1. 4.12×10^6	2. 3.4×10^{-5}
Is the exponent positive or negative?	_____	_____
Move the decimal point right or left? How many places?	_____	_____
Write the number in standard notation.	_____	_____

Write each number in standard notation.

3. 8×10^5 4. 7.1×10^{-4} 5. 3.14×10^8

_____   _____   _____

To convert to scientific notation, determine the factor between 1 and 10. Then determine the power of 10 by counting from the decimal point in the first factor to the decimal point in the given number.

Complete to write each in scientific notation.

	6. 32,000,000	7. 0.0000000712
What is the first factor?	_____	_____
From its location in the first factor, which way must the decimal move to its location in the given number? How many places?	_____	_____
Write the number in scientific notation.	_____	_____

Write each number in scientific notation.

8. 41,000,000   9. 0.0000000643   10. 1,370,000,000

_____   _____   _____

Exponents and Roots

Practice B: Scientific Notation

Write each number in standard notation.

1. 2.54×10^2 2. 6.7×10^{-2} 3. 1.14×10^3 4. 3.8×10^{-1}

5. 7.53×10^{-3} 6. 5.6×10^4 7. 9.1×10^5 8. 6.08×10^{-4}

Write each number in scientific notation.

9. 75,000   10. 208,000,000,000   11. 907,190,000,000

12. 56   13. 0.093   14. 0.0000000000000006

15. 0.00000000007812   16. 0.00000000505   17. 0.0030070

18. Jupiter is about 778,120,000 kilometers from the Sun. Write this number in scientific notation.

_____

19. The *E. coli* bacterium is about 5×10^{-7} meters wide. A hair is about 1.7×10^{-5} meters wide. Which is wider, the bacterium or the hair?

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