Name _____ Class _____ Date _____

Reteaching 7-2

Scientific Notation

OBJECTIVE: Writing numbers in scientific notation

MATERIALS: None

To write a number in **scientific notation**, follow these steps:

- Move the decimal to the right of the first integer.
- If the original number is greater than 1, multiply by 10^n, where n represents the number of places the decimal was moved to the left.
- If the original number is less than 1, multiply by 10^{-n}, where n represents the number of places the decimal was moved to the right.

Examples

Write each number in scientific notation.

a. 9,040,000,000 ← **standard form**

9.040 000 000. ← **Move the decimal to the left nine places.**

9.04×10^9 ← **Drop all insignificant 0's. Multiply by the appropriate power of 10.**

b. 0.000 000 8 ← **standard form**

0.000 000 8. ← **Move the decimal to the right seven places.**

8.0×10^{-7} ← **Multiply by the appropriate power of 10.**

Exercises

Write each number in scientific notation.

1. 420,000 **2.** 5,100,000,000 **3.** 260 billion

4. 830 million **5.** 0.00075 **6.** 0.004005

Write each number in standard notation.

7. 6.345×10^8 **8.** 3.2×10^{-5} **9.** 4.081×10^6

10. 2.581×10^{-3} **11.** 3.07×10^{-2} **12.** 1.526×10^6

13. 8.04×10^{-4} **14.** 7.625×10^5 **15.** 6.825×10^4

16. 3.081×10^{-5} **17.** 8.3847×10^2 **18.** 3.6245×10^{-2}

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