

Name: _____
Hour: _____ Date: _____

Chemistry: Scientific Notation

Part A: Express each of the following in standard form.

- | | |
|--------------------------|--------------------------|
| 1. 5.2×10^3 | 5. 3.6×10^1 |
| 2. 9.65×10^{-4} | 6. 6.452×10^2 |
| 3. 8.5×10^{-2} | 7. 8.77×10^{-1} |
| 4. 2.71×10^4 | 8. 6.4×10^{-3} |

Part B: Express each of the following in scientific notation.

- | | |
|------------|-------------|
| 1. 78,000 | 5. 16 |
| 2. 0.00053 | 6. 0.0043 |
| 3. 250 | 7. 0.875 |
| 4. 2,687 | 8. 0.012654 |

Part C: Use the exponent function on your calculator (EE or EXP) to compute the following.

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|--|---|
| 1. $(6.02 \times 10^{23})(8.65 \times 10^4)$ | 8. $\frac{(5.4 \times 10^4)(2.2 \times 10^7)}{4.5 \times 10^5}$ |
| 2. $(6.02 \times 10^{23})(9.63 \times 10^{-2})$ | 9. $\frac{(6.02 \times 10^{23})(-1.42 \times 10^{-15})}{6.54 \times 10^{-5}}$ |
| 3. $\frac{5.6 \times 10^{-18}}{8.9 \times 10^8}$ | 10. $\frac{(6.02 \times 10^{23})(-5.11 \times 10^{-27})}{-8.23 \times 10^5}$ |
| 4. $(-4.12 \times 10^{-4})(7.33 \times 10^{12})$ | 11. $\frac{(3.1 \times 10^{14})(4.4 \times 10^{-12})}{-6.6 \times 10^{-14}}$ |
| 5. $\frac{1.0 \times 10^{-14}}{4.2 \times 10^{-6}}$ | 12. $\frac{(8.2 \times 10^{-3})(-7.9 \times 10^7)}{7.3 \times 10^{-16}}$ |
| 6. $\frac{7.85 \times 10^{26}}{6.02 \times 10^{23}}$ | 13. $\frac{(-1.6 \times 10^5)(-2.4 \times 10^{15})}{8.9 \times 10^3}$ |
| 7. $(-3.2 \times 10^{-7})(-8.6 \times 10^{-9})$ | 14. $(7.0 \times 10^{28})(-3.2 \times 10^{-20})(-6.4 \times 10^{35})$ |