

**Comparing and Ordering Numbers in Scientific Notation****DO NOT rewrite them as decimals!**

1) To compare two numbers given in scientific notation, first compare the \_\_\_\_\_.  
The one with the greater exponent will be \_\_\_\_\_.

2) If the exponents are \_\_\_\_\_, compare their decimals.

Examples:    **1. Compare  $6.23 \times 10^{14}$  and  $8.912 \times 10^{12}$**

**2. Which is greater,  $5.15 \times 10^{-4}$  or  $6.35 \times 10^{-5}$**

**3. Compare  $3.28 \times 10^{17}$  and  $4.25 \times 10^{17}$**

**4. Order from least to greatest  $2.81 \times 10^{-7}$ ;  $2.01 \times 10^3$ ;  $2.72 \times 10^{-7}$ ;  $9.45 \times 10^{-4}$ .**

Compare:     $2.56 \times 10^5$  \_\_\_\_\_  $4.2 \times 10^{-7}$

$4.3 \times 10^4$  \_\_\_\_\_  $1.6 \times 10^6$

$7.1 \times 10^{-2}$  \_\_\_\_\_  $2.9 \times 10^{-6}$

$5.27 \times 10^5$  \_\_\_\_\_  $2.139 \times 10^5$

In 2005, Hurricane Katrina caused over \$125 billion in damage in the southern United States.  
Write \$125 billion in scientific notation.

**/1. Evaluate. Show negative exponent both as a decimal and as a fraction.**

1) $10^4$	2) $10^{-1}$	3) $10^3$	4) $10^{-3}$
5) $10^5$	6) $10^{-2}$	7) $10^0$	8) $10^{-5}$

**2. Write the numbers in scientific notations.**

1) 98,000	2) 0.0004	3) 0.0056	4) 0.091
5) 0.0000451	6) 0.0089	7) 158	8) 30,600

**3. Write the numbers in standard form.**

1) $9 \times 10^{-2}$	2) $42 \times 10^4$	3) $8.3 \times 10^{-2}$	4) $1.95 \times 10^{-3}$
5) $9.02 \times 10^7$	6) $2.3 \times 10^{-1}$	7) $6.032 \times 10^5$	8) $8.977 \times 10^{-6}$

**4. Compare.**

1)  $3.5 \times 10^{-4}$  \_\_\_\_  $2.1 \times 10^{-6}$ ;

2)  $1.9 \times 10^{-9}$  \_\_\_\_  $5.3 \times 10^{-9}$

3)  $2.3 \times 10^5$  \_\_\_\_  $2.3 \times 10^{-7}$ ;

4)  $6.279 \times 10^5$  \_\_\_\_  $1.8 \times 10^7$

**5. The table lists the populations of five countries.  
List the countries from least to greatest population.**

Country	Population
Australia	$2.0 \times 10^7$
Brazil	$1.9 \times 10^8$
Egypt	$7.7 \times 10^7$
Luxemburg	$4.7 \times 10^5$
Singapore	$4.4 \times 10^6$

**6. Write each fraction as a percent.**

1)  $\frac{3}{40}$

2)  $\frac{7}{125}$

3)  $\frac{5}{9}$

4)  $\frac{1}{3}$