

## Writing and Comparing Numbers in Scientific Notation

### Writing and Comparing Numbers in Scientific Notation

Name \_\_\_\_\_ Date \_\_\_\_\_

**Directions:** Complete the following exercises and problems.

Rewrite in scientific notation.

1. 0.000357 \_\_\_\_\_                      2. 0.00127 \_\_\_\_\_

For each problem below, place the proper sign (<, >, =) in the space provided.

3. 5,100 \_\_\_\_\_  $5.1 \times 10^3$                       4.  $4.3 \times 10^{-4}$  \_\_\_\_\_  $4.32 \times 10^{-4}$

5.  $7.8 \times 10^{-7}$  \_\_\_\_\_  $7.8 \times 10^{-8}$                       6.  $3.2 \times 10^{-10}$  \_\_\_\_\_  $3.2 \times 10^{10}$

7. Suppose the table below displays data for the top 10 prime-time television shows for a given week in the year. Complete the empty column in the table by converting the number of households into scientific notation.

Rank	Number of Households	Number of Households (written in scientific notation)
1	16,600,000	
2	14,400,000	
3	12,400,000	
4	11,800,000	
5	11,400,000	
6	11,200,000	
7	11,000,000	
8	10,900,000	
9	10,500,000	
10	10,300,000	

Name \_\_\_\_\_

Date \_\_\_\_\_

Comparing Scientific Notation Worksheet

Homeroom \_\_\_\_\_

1. Place the following numbers in order from least to greatest:

$7.8 \times 10^6$ ,  $5.1 \times 10^4$ ,  $1.25 \times 10^5$ ,  $4.09 \times 10^4$

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6. Which of these numbers is the least?

- a.  $3.5 \times 10^7$                       b.  $3 \times 10^7$   
c.  $5 \times 10^7$                          d.  $5.5 \times 10^7$

2. Which of the following numbers is the least?

- a.  $7 \times 10^8$                       b.  $7 \times 10^9$   
c.  $7.1 \times 10^8$                     d.  $7.1 \times 10^9$

7. Which of these numbers is the greatest?

- a.  $9 \times 10^9$                       b.  $9 \times 10^8$   
c.  $8 \times 10^9$                       d.  $8 \times 10^8$

3. Which number is the greatest?

- a.  $5.25 \times 10^5$                     b.  $5.55 \times 10^5$   
c.  $2.55 \times 10^5$                     d.  $5 \times 10^5$

8. Order the following from least to greatest:

$6.8 \times 10^6$ ,  $6 \times 10^6$ ,  $6.6 \times 10^6$ ,  $6.1 \times 10^6$

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4. The diameter of the planet Mercury is  $4.87 \times 10^3$  kilometers. The diameter of the planet Venus is  $1.21 \times 10^4$  kilometers. The diameter of Earth is  $1.28 \times 10^4$  kilometers. The diameter of Mars is  $6.79 \times 10^3$  kilometers. Which planet has the smallest diameter?

- a. Mercury                      b. Venus  
c. Earth                         d. Mars

9. Which of these numbers is the greatest?

- a.  $5.406 \times 10^8$                     b.  $5.604 \times 10^9$   
c.  $5.504 \times 10^7$                     d.  $6.504 \times 10^8$

5. Order the following from greatest to least:

$5 \times 10^3$ ,  $3.2 \times 10^8$ ,  $1.2 \times 10^8$ ,  $7 \times 10^5$

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10. Which of these numbers is the least?

- a.  $9 \times 10^4$                          b.  $1.2 \times 10^5$   
c.  $3.01 \times 10^9$                       d.  $1.901 \times 10^4$