

Algebra I

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Hour: \_\_\_\_\_

### **Classwork 10.4- Scientific Notation**

- 1.) Why is it important to be able to write a number with many zeros in scientific notation?
  
  
  
  
  
  
  
  
  
  
- 2.) Explain how to write the distance in miles from Earth to the sun using Scientific notation.
  
  
  
  
  
  
  
  
  
  
- 3.) Explain how to use the properties of exponents to multiply two numbers written in scientific notation. Use 240,000 and 0.006 in your discussion.

**Write each number in scientific notation.**

4.) 2,000,000

5.) 8, 000,000,000

6.) 340,000

7.) 58,000

8.) 0.00008

9.) 0.0000005

10.) 0.000000082

**Write each number in customary notation.**

11.)  $3 \times 10^4$

12.)  $4 \times 10^8$

13.)  $6.7 \times 10^{10}$

14.)  $9.01 \times 10^5$

15.)  $4 \times 10^{-7}$

16.)  $5 \times 10^{-9}$

17.)  $8.8 \times 10^{-12}$

18.)  $7.2 \times 10^{-10}$

**Social Studies:** The following information shows how large numbers appear when studying different aspects of American culture. Write each in scientific notation.

19.) 125, 000: the number of passengers bumped on United States airlines each year due to overbooking

20.) 5 trillion: the total number of outstanding stock in the stock market

21.) 5.4 million: the number of American businesses owned by women

22.) 3.7 million: the number of square feet in the Pentagon, the world's largest office building

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**Perform the following computations. Answer using scientific notation.**

23.)  $(2 \times 10^4)(3 \times 10^5)$

24.)  $(6 \times 10^8)(1 \times 10^6)$

25.)  $(8 \times 10^6)(2 \times 10^{10})$

26.)  $(9 \times 10^6)(7 \times 10^6)$

27.)  $(9 \times 10^6) + (7 \times 10^6)$

28.)  $(9 \times 10^6) - (7 \times 10^6)$

29.)  $\frac{9 \times 10^8}{2 \times 10^4}$

30.)  $\frac{3 \times 10^4}{6 \times 10^4}$