

Name _____

Date _____

Chapter 2 Review – Scientific Notation

Math 8

Tell whether each number is written correctly in scientific notation. If it is NOT in scientific notation, state the reason.

1. 4.37×10^8 _____

2. 0.56×10^{-1} _____

3. 9.3×100^4 _____

4. 17.8×10^{-1} _____

5. 2.66×10^{-3} _____

6. 4×10^6 _____

Write each number in scientific notation.

7. 3,400

8. 12,500

9. 0.00088

10. 0.7^{-3}

11. 987,000,000

12. 0.00000022

Circle the greater number in each pair of numbers.

13. 2.4×10^3 and 1.4×10^4

14. 6.3×10^{-2} and 5.9×10^{-1}

15. 8.11×10^7 and 8×10^6

16. 7.23×10^{-7} and 2.73×10^{-6}

17. 1.5×10^{-4} and 9.1×10^{-5}

18. 5.43×10^9 and 5.4×10^8

Write the solution to each problem below in scientific notation.

19. $2.37 \times 10^4 + 1.4 \times 10^5$

20. $9.6 \times 10^7 - 8.4 \times 10^6$

21. $7.8 \times 10^{-6} + 3.6 \times 10^{-5}$

22. $5 \times 10^8 - 6.2 \times 10^7$

23. $4 \times 10^{-2} + 3.1 \times 10^{-3}$

24. $6.8 \times 10^{-5} + 8.6 \times 10^{-4}$

Solve each problem below. Show work including the operations performed.

25. The Jones' family traveled 4.3×10^3 miles per hour for 1.5×10^2 hours. How far did the Jones' family travel?

26. The mass of Jupiter is approximately 6.82×10^{30} kilograms. The mass of Mars is approximately 3,690,000,000,000,000,000,000,000,000 kilograms. What is the difference between the approximate masses, in kilograms, of Jupiter and Mars? Express your answer in scientific notation.

27. In 2013 the Los Angeles Dodgers opening day payroll was about $\$2.16 \times 10^8$ and the Houston Astros opening day payroll was about $\$2.4 \times 10^7$. How much higher was the Dodgers' payroll?

28. The population of Crowded Town is 4×10^6 and the population of Empty Village is 8×10^3 . How many times the population of Empty Village is Crowded Town?

29. In 2012, New York City (NYC) and Los Angeles (LA) has the highest populations of any cities in the United States. NYC's population was about 8.1×10^6 and LA's population was about 3.8×10^6 . What is the population of these two cities combined?

30. In 2012, the population of New York State (NY) was about 2×10^7 and the population of the State of Oregon (OR) was about 4×10^7 .

a. How many times the population of OR is NY?

b. How many more people live in NY than OR?

