

#1-3, Find the value of each power of 10 and write in decimal form.

1. 10^6 2. 10^{-5} 3. 10^9

#4-6, Write each number as a power of 10 (Scientific notation form OK also).

4. .000000001 5. 1,000,000,000,000 6. 0.1

#7-10, Write each value in decimal form.

7. 9.46×10^{-3} 8. 7×10^5 9. 3.657×10^8 10. 6.8×10^{-5}

#11-14, Write each in scientific notation form.

11. .0002 12. 23.5 13. 0.0000077 14. 40,180,000

15. Order the list from least to greatest: 8.5×10^{-1} , 3.6×10^3 , 5.85×10^{-5} , 2.5×10^{-1} , 8.5×10^8 ,

16. At the beginning of the 21st century the population of China was about 1,287,000,000. Write the number in scientific notation.

17. Gabe is allergic to pollen. The diameter of a grain of pollen is between 1.2×10^{-5} and 9×10^{-5} m. Gabe's air purifier has a filter that removes particles larger than 3×10^{-7} m. Will the filter remove the pollen?

#18-21, Is the number written in correct scientific notation? If not, fix it.

18. 50×10^{-5} 19. 8.1×10^{25} 20. 0.25×10^3 21. 48,000

22. Order from *greatest to least*: 2.15×10^{-1} , 5.12×10^2 , 1.25×10^{-3} , 2.15×10^{-2} , 1.52×10^{-2} , 5.12×10^{-3}

#23-25, Can you use laws of exponents or your calculator correctly? Write each answer in BOTH formats.

23. $(3 \times 10^2)(2 \times 10^4)$ 24. $(2.2 \times 10^{-4})(4 \times 10^{-8})$ 25. $(5 \times 10^5)(1.5 \times 10^{-3})$