

**Practice C**

For use with pages 470–475

**Rewrite in decimal form.**

- |                                   |                              |                              |
|-----------------------------------|------------------------------|------------------------------|
| 1. $9.99 \times 10^6$             | 2. $1.356 \times 10^{-3}$    | 3. $6.01 \times 10^1$        |
| 4. $7.00563 \times 10^4$          | 5. $3.2 \times 10^{-4}$      | 6. $3.50086 \times 10^0$     |
| 7. $7.78895233146 \times 10^{10}$ | 8. $0.206230 \times 10^{-6}$ | 9. $8.623514 \times 10^{13}$ |

**Rewrite in scientific notation.**

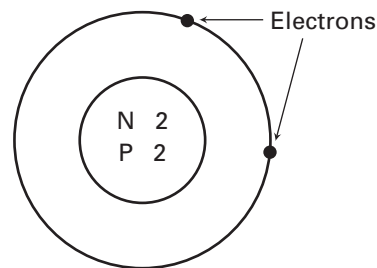
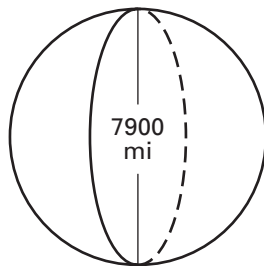
- |               |                 |                    |
|---------------|-----------------|--------------------|
| 10. 0.032     | 11. 33,254.236  | 12. 87,000         |
| 13. 0.0000222 | 14. 0.00099578  | 15. 70,000,000     |
| 16. 0.852246  | 17. 0.000000008 | 18. 12,840,000,000 |

**Evaluate the expression without a calculator. Write the result in decimal form.**

- |   |  |   |
|---|--|---|
| 19. $(9 \times 10^{-3}) \cdot (8 \times 10^{-6})$ | 20. $(4 \times 10^7) \cdot (1.2 \times 10^{-2})$ | 21. $(6.8 \times 10^2) \cdot (5 \times 10^3)$         |
| 22. $(4.2 \times 10^{-6}) \cdot (2 \times 10^5)$  | 23. $(3.1 \times 10^6) \cdot (4 \times 10^3)$    | 24. $(0.7 \times 10^{-5}) \cdot (5.4 \times 10^{-1})$ |
| 25. $\frac{3 \times 10^5}{8 \times 10^{-2}}$      | 26. $\frac{12.6 \times 10^3}{3 \times 10^{-2}}$  | 27. $\frac{4.96 \times 10^{-7}}{6.2 \times 10^{-4}}$  |
| 28. $(4.0 \times 10^3)^2$                         | 29. $(2 \times 10^{-3})^3$                       | 30. $(1.25 \times 10^{-1})^{-4}$                      |

**Write the number in scientific notation.**

31. **Human Cells** The body of a human has more than 1,000,000,000,000 cells.
32. **Human Ears** The human ear grows about 0.0087 inch in one year. How much does the ear grow in one month?
33. **Earth's Diameter** The polar diameter of Earth is approximately 7900 miles. There are approximately 161,000 cm in one mile. What is the polar diameter of Earth in cm?
34. **Mass of Helium Atom** A proton (P) and a neutron (N) each weigh  $1.67 \times 10^{-24}$  gram. An electron weighs  $9.11 \times 10^{-28}$  gram. Find the mass of one helium atom.



35. **Surface Area** The total surface area of Earth is about  $1.97 \times 10^8$  square miles. The surface area of land on Earth is about  $5.73 \times 10^7$  square miles. Find the ratio of surface area of land to that of the entire planet.