

8.4

NAME _____

DATE _____

Practice B

For use with pages 470–475

Rewrite in decimal form.

- | | | |
|----------------------------|----------------------------|--------------------------------|
| 1. 3.79×10^5 | 2. 2.5×10^{-2} | 3. 8.44×10^1 |
| 4. 6.5393×10^4 | 5. 3.589×10^{-3} | 6. 9.1187×10^0 |
| 7. 1.0056×10^{-5} | 8. 7.2658746×10^8 | 9. $4.33652157 \times 10^{11}$ |

Rewrite in scientific notation.

- | | | |
|----------------|------------------|-------------------|
| 10. 64.3 | 11. 0.0602 | 12. 998.653 |
| 13. 22,078,600 | 14. 45.668 | 15. 63,000,000 |
| 16. 0.007485 | 17. 0.0000056388 | 18. 7,960,000,000 |

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

- | | | |
|---|---|---|
| 19. $(5 \times 10^{-3}) \cdot (3 \times 10^6)$ | 20. $(9 \times 10^{-4}) \cdot (4 \times 10^{-1})$ | 21. $(6.2 \times 10^{-5}) \cdot (4.4 \times 10^7)$ |
| 22. $\frac{5 \times 10^{-2}}{8 \times 10^{-6}}$ | 23. $\frac{2.16 \times 10^3}{3.6 \times 10^{-7}}$ | 24. $\frac{7.7 \times 10^{-4}}{1.1 \times 10^{-1}}$ |
| 25. $(4 \times 10^{-4})^{-1}$ | 26. $(5 \times 10^{-2})^3$ | 27. $(2.1 \times 10^3)^2$ |

Write the number in scientific notation.

- | | |
|---|---|
| 28. Neptune to Sun The mean distance of Neptune to the sun is 2,796,460,000 miles. | 29. Red Blood Cells The thickness of a red blood cell is approximately 0.0003125 inch. |
| 30. Shoes Americans buy more than 850,000,000 pairs of shoes each year. | 31. Largest Country The largest country is Russia. It has a total area of 6,592,800 square miles. |
| 32. Pixels The images on a computer screen are made up of more than 5000 pixels, or dots, per square inch. How many pixels are on a computer screen that is 154 square inches? | 33. Smallest Newspaper The world's smallest newspaper is a Bengali newspaper called "Bireswar-Smriti." It has an area of 0.00756 square foot. |
| 34. Blinking Consider a person who blinks about 20,000 times per day and who lives to be 76 years old. Estimate the number of times the person blinks during his or her lifetime. Do not acknowledge leap years. Write your answer in decimal form and in scientific notation. | 35. California California has an area of approximately 1.56×10^5 square miles. California has a population of about 2.98×10^7 . How many people are there per square mile? |