

**Practice 8-2****Scientific Notation****Write each number in standard notation.**

- |                             |                           |                            |                            |
|-----------------------------|---------------------------|----------------------------|----------------------------|
| 1. $7 \times 10^4$          | 2. $3 \times 10^{-2}$     | 3. $2.6 \times 10^5$       | 4. $7.1 \times 10^{-4}$    |
| 5. $5.71 \times 10^{-5}$    | 6. $4.155 \times 10^7$    | 7. $3.0107 \times 10^2$    | 8. $9.407 \times 10^{-5}$  |
| 9. $31.3 \times 10^6$       | 10. $83.7 \times 10^{-4}$ | 11. $0.018 \times 10^{-1}$ | 12. $0.016 \times 10^5$    |
| 13. $8.0023 \times 10^{-3}$ | 14. $6.902 \times 10^8$   | 15. $1005 \times 10^2$     | 16. $0.095 \times 10^{-1}$ |

**Write each number in scientific notation.**

- |                       |                          |                        |                            |
|-----------------------|--------------------------|------------------------|----------------------------|
| 17. 51,000,000        | 18. 975,000,000,000      | 19. 0.00000012         | 20. 0.000005008            |
| 21. 1560 billion      | 22. 0.5 million          | 23. 2 thousandths      | 24. 1095 millionths        |
| 25. $194 \times 10^3$ | 26. $154 \times 10^{-3}$ | 27. $0.05 \times 10^6$ | 28. $0.031 \times 10^{-4}$ |
| 29. 790 thousand      | 30. 25 hundredths        | 31. 0.000000000159     | 32. 5,000,900,000,000      |

**Order the numbers in each list from least to greatest.**

33.  $7 \times 10^{-7}$ ,  $6 \times 10^{-8}$ ,  $5 \times 10^{-6}$ ,  $4 \times 10^{-10}$
34.  $5.01 \times 10^{-4}$ ,  $4.8 \times 10^{-3}$ ,  $5.2 \times 10^{-2}$ ,  $5.6 \times 10^{-2}$
35. 62,040,  $6.2 \times 10^2$ ,  $6.207 \times 10^3$ ,  $6.34 \times 10^{-1}$
36.  $10^{-3}$ ,  $5 \times 10^{-3}$ ,  $8 \times 10^{-2}$ ,  $4 \times 10^{-1}$

**Simplify. Write each answer using scientific notation.**

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|-----------------------------|-----------------------------|-----------------------------|
| 37. $4(3 \times 10^5)$      | 38. $5(7 \times 10^{-2})$   | 39. $8(9 \times 10^9)$      |
| 40. $7(9 \times 10^6)$      | 41. $3(1.2 \times 10^{-4})$ | 42. $2(6.1 \times 10^{-8})$ |
| 43. $3(1.2 \times 10^{-4})$ | 44. $3(4.3 \times 10^{-4})$ | 45. $3(3.2 \times 10^{-2})$ |

**Complete the table.**

| Units of Area in Square Feet |                       |               |                         |
|------------------------------|-----------------------|---------------|-------------------------|
|                              | Unit                  | Standard Form | Scientific Notation     |
| 46.                          | $1 \text{ in.}^2 =$   |               | $6.9444 \times 10^{-3}$ |
| 47.                          | $1 \text{ link}^2 =$  | 0.4356        |                         |
| 48.                          | $1 \text{ rod}^2 =$   | 272.25        |                         |
| 49.                          | $1 \text{ mi}^2 =$    |               | $2.78 \times 10^7$      |
| 50.                          | $1 \text{ cm}^2 =$    | 0.001076      |                         |
| 51.                          | $1 \text{ hectare} =$ |               | $1.08 \times 10^7$      |