

Algebra I
10.4 Worksheet
Scientific Notation

NAME: _____
DATE: _____ HOUR: _____

Write each number in scientific notation.

1. 3,000,000 3×10^6

2. 720,000 _____

3. 63,400,000 _____

4. 0.008 _____

5. 0.000075 _____

6. 0.00000000905 _____

Write each number in customary notation.

7. 1.5×10^{-6} 0.0000015

8. 6.02×10^7 _____

9. 7×10^{-8} _____

10. 8.3×10^{-1} _____

11. 2.907×10^{10} _____

12. 5×10^5 _____

Write each number in scientific notation.

1. 200,000 _____

2. 500,000,000 _____

3. 210,000 _____

4. 40,000 _____

5. 6,500,000,000 _____

6. 840,000,000 _____

7. 466,000,000,000 _____

8. 37,500 _____

9. 0.20 _____

10. 0.0008 _____

11. 0.000076 _____

12. 0.00645 _____

13. 0.00000362 _____

14. 0.000978 _____

Write each number in customary notation.

15. 5×10^3 _____

16. 6×10^5 _____

17. 9×10^4 _____

18. 5.6×10^7 _____

19. 8.56×10^{10} _____

20. 3.56×10^8 _____

21. 6×10^{-2} _____

22. 6.7×10^{-5} _____

23. 8.76×10^{-6} _____

24. 9.22×10^{-8} _____

(use EE)

Perform each computation. Write your answers in scientific notation.

25. $(4 \times 10^2)(3 \times 10^2)$ _____ 26. $(6 \times 10^4)(2 \times 10^5)$ _____
27. $(2 \times 10^3) + (4 \times 10^3)$ _____ 28. $(7 \times 10^7) + (5 \times 10^7)$ _____

Skills

In 1-4, write each number in scientific notation.

1. 324.8 3.248×10^2 2. 7,960,000 _____
3. 3.5 trillion _____ 4. 600 million _____
 3,500,000,000,000

In 5-7, write each number in customary notation.

5. 3.7×10^7 _____ 6. 9.168×10^4 _____
7. the number of molecules in
 18 grams of water: 6.023×10^{23} _____

Properties

In 8-10, explain why each number is not in scientific notation.

8. $3 \times 10^{2.5}$ _____
9. $.034 \times 10^{10}$ _____
10. 9.5×10^6 _____

Representations

In 11-13, write a key sequence. Then write the calculator display.

- | | Key Sequence | Display |
|--------------------------|-----------------|--|
| 11. 3.8×10^{14} | <u>3.8 E 14</u> | <u>3.8×10^{14}</u> |
| 12. 27,400,000,000 | _____ | _____ |
| 13. 5 trillion | _____ | _____ |

14. The U.S. population in 1991 was about 250 million people. The average individual income tax paid was about \$1870. Estimate the total amount of money paid in individual income tax in 1991. 250,000,000

- a. _____ b. _____
 calculation to do key sequence
- c. _____
 calculator display
- d. _____

_____ sentence to answer the question