

Name: KEY

Date: _____ Per: _____

Chemistry
Scientific Notation WS

I. Convert the following decimal numbers to scientific notation:

1. 900
 9×10^2

6. 0.134
 1.34×10^{-1}

2. 2,800
 2.8×10^3

7. 0.000656
 6.56×10^{-4}

3. 15,392
 1.5392×10^4

8. 0.0000009
 9×10^{-7}

4. 854,000
 8.54×10^5

9. 12,867,000
 1.2867×10^7

5. 0.072
 7.2×10^{-2}

10. 0.000200042
 2.00042×10^{-4}

II. Convert the following scientific notation numbers to decimal numbers:

11. 6.10×10^2
610

16. 4×10^{13}
40,000,000,000,000

12. 3.8×10^4
38,000

17. 7.24×10^6
7,240,000

13. 7.72×10^{-1}
0.772

18. 1.006×10^{-9}
0.000 000 001006

14. 8.18×10^7
81,800,000

19. 2.608×10^{-2}
0.02608

15. 9.4006×10^{-3}
0.0094006

20. 6.02×10^{23}
602,000,000,000,000,000,000,000

III. Perform the following multiplications and division, expressing your answer in scientific notation:

21. $5 \times 10^2 \cdot 3 \times 10^4 = \underline{1.5 \times 10^7}$

22. $3.3 \times 10^{-1} \cdot 2.01 \times 10^7 = \underline{6.6 \times 10^6}$

23. $8.92 \times 10^9 + 7.75 \times 10^4 = \underline{8.92 \times 10^9}$

24. $6.24 \times 10^{-5} + 4.091 \times 10^3 = \underline{4.091 \times 10^3}$

25. $9.11 \times 10^{-31} \cdot 6.02 \times 10^{23} = \underline{5.48 \times 10^{-7}}$

26. $4.87 \times 10^3 + 1.092 \times 10^{-7} = \underline{4.87 \times 10^3}$

I rounded a lot,
So your answers
may vary!
-C

IV. Perform the following additions and subtractions, expressing your answer in scientific notation:

27. $9 \times 10^3 + 4 \times 10^3 = \underline{1.3 \times 10^4}$

28. $2.4 \times 10^{-2} - 7.8 \times 10^{-3} = \underline{1.62 \times 10^{-2}}$

29. $6.61 \times 10^6 + 8.0 \times 10^4 = \underline{6.69 \times 10^6}$

30. $3.03 \times 10^8 - 1.8 \times 10^9 = \underline{-1.497 \times 10^9}$

31. $4.1145 \times 10^2 + 8.275 \times 10^{-2} = \underline{4.1153 \times 10^2}$

32. $3.49 \times 10^{-1} + 7.0 \times 10^3 = \underline{7.000349 \times 10^3}$