

SIGNIFICANT DIGITS & SCIENTIFIC NOTATION EXERCISES

Do the following problems on separate paper, using homework guidelines.

Determine how many significant figures occur in each of the following numbers:

1. 926.9 — 4
2. 707 — 3
3. 123.06 — 5
4. 0.0402 — 3
5. 0.82610 — 5
6. 338.00 — 5

Perform the noted operations. Correct answers must contain the required number of significant figures.

7. $15.6 + 29.4 + 215.83 + 98.1 = 358.9$
8. $52.5 + 44.99 = 97.5$
9. $125.957 - 331.22 = 205.26$
10. $1.6204 - 1.593 = 0.027$
11. $211.5 \times 2.48 = 525$
12. $1.395 \times 2.898 = 4.043$
13. $3.68 \div 0.94 = 3.9$
14. $15.2 \div 3.7 = 4.1$

Round the following numbers to three significant figures.

15. 0.6824 = 0.682
16. 12.84 = 12.8
17. 4.162 = 4.16
18. 3.339 = 3.34
19. 5.558 = 5.56
20. 2.635 = 2.64
21. 7.825 = 7.83

Express the following numbers in scientific notation.

22. 9365.3 — 9.3653×10^3
23. 712.0 — 7.120×10^2
24. 2000.0 — 2.0000×10^3
25. 0.2541 — 2.541×10^{-1}
26. 0.000822 — 8.22×10^{-4}
27. 0.00000477 — 4.77×10^{-6}