

Significant figure practice #1

Name _____

Ch. 3

Period _____ Date _____

How many significant figures are in the following measurements?

- | | | | |
|------------------|----------------------------------|---------------------------------|--------------------|
| 1. _____ 2.708 | 6. _____ 0.00458 | 11. _____ 789.006 | 16. _____ 3322.008 |
| 2. _____ 16.3050 | 7. _____ 589000 | 12. _____ 3.67×10^{-4} | 17. _____ 540300 |
| 3. _____ 50.007 | 8. _____ 6.38×10^9 | 13. _____ 507.7800 | 18. _____ 4506.003 |
| 4. _____ 3000010 | 9. _____ 50800 | 14. _____ 0.00000875 | 19. _____ 287.345 |
| 5. _____ 0.00045 | 10. _____ 4.678×10^{22} | 15. _____ 0.00480 | 20. _____ 56.000 |

Round off the following numbers to three significant figures.

- | | | |
|-----------------|---------------------------------|--------------------|
| 1. 4325 _____ | 2. 6.873×10^3 _____ | 3. 0.17354 _____ |
| 4. 7.8939 _____ | 5. 9.237×10^{-3} _____ | 6. 0.0299817 _____ |

How many significant figures does each of the measured numbers contain?

- | | | |
|----------------------------------|---------------------------------------|--------------------------------------|
| 1. 0.0278 meters _____ | 2. 1.3 centimeters _____ | 3. 1.00 foot _____ |
| 4. 8.021 yards _____ | 5. 7.98×10^{-3} pounds _____ | 6. 0.2003 tons _____ |
| 7. 4.69×10^4 tons _____ | 8. 1×10^{12} atoms _____ | 9. 1.73×10^{24} atoms _____ |

Express the following numbers in standard exponential form (scientific notation) with the indicated number of significant figures.

- | | |
|-------------------------------|----------------------------------|
| 1. 1000 (2 sig fig) _____ | 2. 43,927 (3 sig fig) _____ |
| 3. 0.000286 (3 sig fig) _____ | 4. 0.000098765 (5 sig fig) _____ |
| 5. 10,000 (2 sig fig) _____ | |

Express the following exponentials as ordinary numbers (expanded form).

- | | |
|--------------------------------|--------------------------------|
| 1. 7.23×10^4 _____ | 2. 8.193×10^2 _____ |
| 3. 1.98×10^{-3} _____ | 4. 7.51×10^{-7} _____ |
| 5. 5.43×10^0 _____ | |