

Math operations when using significant digits in measurement:

Video

Using significant digit rules to round answers:

1. State the rule for addition and subtraction problems: _____

2. State the rule for multiplication and division problems: _____

3. $13.3 + 1.0243 + 12.1 =$

un-rounded answer

sd rounded answer

6. $(4.35 \times 10^6) + (27.1 \times 10^6) =$

un-rounded answer

sd rounded answer

4. $55 \times 45.22 =$

un-rounded answer

sd rounded answer

7. $(3.71 \times 10^6) - (5.2 \times 10^7) =$

un-rounded answer

sd rounded answer

5. $7.9 - 7.545 =$

un-rounded answer

sd rounded answer

8. $(2.84 \times 10^{11}) \times (4.3 \times 10^7) =$

un-rounded answer

sd rounded answer

9. $(4 \times 10^{-6}) / (1.28 \times 10^{-8})$

un-rounded answer

sd rounded answer

10. $(2.01 \text{ m}) \times (4 \times 10^{-3} \text{ m}) =$

un-rounded answer

sd rounded answer

Name _____

Sig Fig and Sig fig rounding rules

Please write the number of significant digits:

- | | |
|--------------------------------|--------------------------------|
| 1. 0.0007005 _____ | 6. 9.0×10^{-15} _____ |
| 2. 1866000 _____ | 7. 9×10^8 _____ |
| 3. .0002300 _____ | 8. 0.009090 _____ |
| 4. 1.22000 _____ | 9. 40560.000 _____ |
| 5. 5.00×10^{21} _____ | 10. 0.00120 _____ |

11. Circle the estimate digit in #'s 1 -10 above (1 ea.)

For 12 -16 solve, write the unrounded answer, then round according to the significant figure rounding rules we have covered for math operations. Also, include correct unit labels with answers.

12. $53.75 \text{ kg} + 46.1 \text{ kg} = \frac{\text{_____}}{\text{UNROUNDED}} = \frac{\text{_____}}{\text{Sig Fig ROUNDED}}$

13. $(8.55 \times 10^{-3} \text{ g}) / (2.3 \times 10^{-9} \text{ cm}^3) = \frac{\text{_____}}{\text{UNROUNDED}} = \frac{\text{_____}}{\text{Sig Fig ROUNDED}}$

14. $251.8 \text{ m} \times 2.0 \text{ m} = \frac{\text{_____}}{\text{UNROUNDED}} = \frac{\text{_____}}{\text{Sig Fig ROUNDED}}$

15. $6.70 \times 10^{-9} \text{ cm} - 2 \times 10^{-10} \text{ cm} = \frac{\text{_____}}{\text{UNROUNDED}} = \frac{\text{_____}}{\text{Sig Fig ROUNDED}}$

16. $2.2 \text{ mm} \times (3.34 \times 10^{17} \text{ mm}) = \frac{\text{_____}}{\text{UNROUNDED}} = \frac{\text{_____}}{\text{Sig Fig ROUNDED}}$