WKS 2.1 - Temperature, Scientific Notation, and Significant Figures (1 page)

Temperature Calculations

1. Convert -213 °C to Kelvin. **(60 K)**

2. Convert 455 K to °C. **(182°C)**

3. Calculate the temperature change between an initial temperature of 60°C and a final temperature of 258 K. **(-75 K or °C change)**

Scientific Notation

_____ 1. Expand 5.58 X 10^{2}

_____ 2. Convert 0.000312 to S.N.

_____ 3. Correct 8443 X10^{-5}

_____ 4. Correct 356.7 X 10^{5}

_____ 5. Convert 1045 to S.N.

_____ 6. Convert 134.50 to S.N.

_____ 7. Expand 9.002 X 10^{7}

_____ 8. Convert 7.000 000 000 to S.N.

_____ 9. Expand -6.3 X 10^{-4}

_____ 10. Correct 0.0001348 X 10^{3}

_____ 11. Correct 0.0472 X 10^{-4}

_____ 12. Convert -103700 to S.N.

_____ 13. Convert 0.0775 to S.N.

_____ 14. Expand 1.11111X 10^{-6}

_____ 15. Correct 31.673 X 10^{-3}

_____ 16.Correct 0.002002 X 10^{-1}

Perform the following calculations and express your answer in correct Scientific Notation.

_____ 17. 3.0 X 10^{2} times 2.0 X 10^{3}

_____ 18. 8.0 X 10^{3} squared

_____ 19. -5.00 X 10^{-2} times 10^{0}

_____ 20. 9.0 X 10^{7} divided by 3.0 X 10^{3}

_____ 21. 2.4 X 10^{12} divided by 4.8 X 10^{-4}

_____ 22. Divide 4.0 X 10^{-65} by 12.0 X 10^{-31}

How many significant figures are in each of the quantities listed below?

_____ a) 454 g

_____ b) .0353 mL

_____ c) 39.0000 m

_____ d) 6.02 x 10^{23} atoms C

_____ e) 3 x 10^{8} m/s

_____ f) .00030400 km

_____ g) 29000 µL

_____ h) 10.00 cL

_____ i) 1.20 x 10^{-3} kPa

_____ j) .0700 mg

_____ k) 5.000 moles

_____ l) 12020 mg

Round off the given quantity 3.798079 grams to the number of significant figures indicated:

one _____ three _____ five _____

two _____ four _____ six _____

90% of a worksheet must be completed showing all work to earn credit for that worksheet!