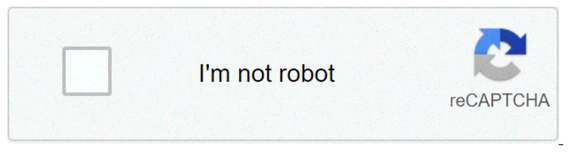

Continue

Chapter 2 analyzing data worksheet answers

1 2 SECTION 2.1 Units and bases MeasurementsDefine yes for time, length, weight and temperature. Explain how the addition of a prefix changes a unit. Compare the derivative units for volume and density. Chemists use an internationally recognized system of units to communicate their results. Chapter 2-1 3 Availability SystÃƒÂ¨Me Internationale d'UnitÃ © S (Yes) It is an internationally established of the measurement system. A base is a unit defined in a measurement system that is based on an object or event in the physical world, and is independent of other units. Chapter 2-1 4 Unit (cont.) Section 2-1 5 Unit (cont.) Section 2-1 6 The basic temperature unit is the Kelvin (K) .units (cont.) The basic unit is Temperature is the Kelvin (K). Zero Kelvin is the point where there is practically no movement of particles or kinetic energy, also known as absolute zero. Two two temperature stairs are Celsius and Fahrenheit. Chapter 2-1 7 Not all quantities can be measured with base yes units.derived Units not all quantities can be measured with a basic unit. A unit that is defined by a combination of basic unit is called derivative unit. Section 2-1 August derived units (cont.) Volume is measured in cubic meters (M3), but this is very large. A cheaper size is the liter, or a cubic decimeter (DM3). Section 2-1 9 It is a derivative unit, g / cm3, the amount of mass for volume.derived units (cont.) Density is a derivative unit, g / cm3, the amount of mass for volume unit . The density equation is the density = mass / volume. Chapter 2-1 10 A B C D Section 2.1 AssessmentWhich of the following is a derivative unit? A. Yard B. Second C. Liter D. kilogram A B C D Chapter 2-1 11 A B C D Section 2.1 AssessmentWhat Is the relationship between mass and volume called? A. DensitÃ B. Spazio C. Imports D. Weight to B C d Chapter 2-1 12 SECTION 2.2 Scientific notation and numbers Dimensional analysisPress in scientific notation. Apply the rules for significant uncertainty figures expressed in measured and calculated values. (Page 50 to 54) Scientists often express numbers in scientific notation and solve problems using dimensional analysis. Section 2-2 13 Scientific Scientific Notation NotationCan To be used to express any number as a number between 1 and 10 (the coefficient) multiplied by 10 high power (exponent). Count the number of positions of the decimal point must be moved to give a coefficient between 1 and 10. Section 14 2-2 Scientific notation (CONT.) The number of places moved equal to the value of the exponent. The exponent is positive when the decimals moved to the left 800 = the exponent is negative when the decimals moves to the right. = Section 2-2 15 Scientific notation (cont.) Adjudition and exponent subtraction must be the same. Rewrite values with the same exponent. Add or subtract coefficients. Example: (cont.) X 10-8 x 10-4 Chapter 2-2 16 Scientific notation Multiplication and the division of multiplicare: the coefficients multiply then add the exponents (2.3 x 103) (4.0 x 105) to be divided : divide the coefficients then subtract the exponents 6.7 x 1.3 x 102 103 Chapter 2-2 17 task: Page 38 2 page 39 4 - 9 page 41 11 12 42 13 18 Page ABCD Section 2.2 AssessmentWhich of the following expresses 9.640,000 in Proper scientific notation? A I '104 B I 105 C 106 D I' 610 A B C D Chapter 2-2 19 include all the figures known plus an estimated digit.Significant significant data figures include all the relevant figures including an estimated figure. Section 2-3 20 significant digits (cont.) Adjust 1: Any non-zero figure is significant. 329 G 3 Significant Figures 3.299 x 10-6 4 Significant Figures Rule 2: Any Zero Locked Among other numbers are significant. 2002 4 figs 3.09 x 10 3 figs 21 Significant (CONT.) Rule 3: ZERI to the left of all other digits are never significant 0.00.345 thousand 3 figs 4 in order to figs chapter 2-3 22 significant figures (cont.) Rule 4: ZERI for the right Of all other figures a) they are significant if there is a decimal point a decimal point tells us. He says. The number is a measure 3900. 21.00 b.) They are not significant if there is no decimal point. At all decimal point that the number is an estimate 3900 621000 Section 2-3 23 Calculators are not aware of important numbers figures.Rounding calculators are not aware of significant figures. The answers must no longer have significant figures than the original data with the lowest figures and must be rounded. Chapter 2-3 Page 24 At Home A page 37, 39 25 Numbers rounding (cont.) Rounding rules The figure to the right of the latest significant figure is less than 5, do not change the last significant digit. 4.564 Ã˜ 4.56 Ã˜ 36.5 Rule 2: If the figure to the right of the last significant figure is greater than 5, up to the last significant figure. Ã˜ 23,6 6,557 Ã˜ 6.56 CHAPTER 2-3 26 ROUNDING NUMBERS (CONT.) Rule 3: If the figures to the right of the last significant digit, to 5 followed by a digit other than zero, up to the last digit Significant. Ã˜ 2.54 Rule 4: If the figures to the right of the last significant figure are a 5 followed by one 0 or no other number to all, a look at the last significant digit. If it is odd, round up; If it is also, not in turn. Ã˜ 2.54 Ã˜ 2.52 27 Numbers rounding (cont.) Addition and subtraction First calculating then turn the answer to the same number of decimal figures (places to the right of the decimal point), as the number of calculation with the minor decimal . Note that it is not necessary to count the number of significant figures during adding or subtraction. Multiplication and round division The answer the same number of significant figures such as the original measure with the lower number of significant figures. Chapter 2-3 28 A B C D Section 2.3 AssessmentDetermine The number of significant figures in the following: 8.200, 723.0, and 0.01. A. 4, 4, and 3 B. 4, 3, and 3 C. 2, 3, and 1 D. 2, 4, and 1 ABCD Section 2-3 29 ABCD Section 2.3 Assessment substance has a density of 2.00 G Accepted / L. The density is measured by 1.80 g / L. What is the percentage error? A G / L B. 0.20 G L C G / L D G / L A B C D Section 2-3 Page / 30 Task Ã ¢ 37 Page 39 Page 44 Ã ¢ 31 SECTION 2.3 Uncertainty DataDefine and compares accuracy and precision. Describe the accuracy of experimental data using error and error percentage. Conversion between the units that use dimensional analysis. (Pages 44 to 46) Measures contain uncertainties that influence the result is presented. Chapter 2-3 32 Accuracy and PrecisionRefers As far as a measured value is of an accepted value. Accuracy refers to how close a series of sizes are one to the other. Chapter 2-3 33 Accuracy and (CONT.) Precision error is defined as the difference between an experimental value and an accepted value. Chapter 2-3 34 Accuracy and precision (CONT.) The error equation is the error = value accepted the experimental value. Percentage error Expresses error in the percentage of the accepted value. Chapter 2-3 35 It is a ratio of equivalent values having a different dimensional analysis units.dimensional analysis is a systematic approach to the solution of problems that conversion factors uses to move, or converted, from one unit to another. A conversion factor is a ratio of equivalent values having different units. Chapter 2-2 36 Dimensional Analysis (CONT.) Writing conversion factors Conversion factors are derived â €