Topic Introduction to Math Systems MAT1000 Academic Level : Bachelor Paper details Objective 1: Use a biblical reference to perform whole number computations. Learning Activity #3: WK1 Biblical Math Discussion  Read Genesis Chapters 5 through 7. Estimate the number of years it took from the creation to the flood. Include your reasoning for your estimate.  Prepare to present your findings and discuss any new perspectives you experienced when looking at this part of biblical history through the lens of mathematics. Objective 2: Describe personal growth in the process of beginning this course and how it may increase success in math. Learning Activity #4: WK2 Learning Strategies Discussion Math often requires the perspectives of fellow students in order to fully comprehend the methods and concepts.  Prepare to discuss your fears coming into this course and your experience so far. Include what you have learned in the process and if you struggled with something and were able to find a solution, or if you were able to find a trick that helped you understand. Objective 3: Review the decimal-place value system for whole numbers. We will start with the basics of the decimal system. Read the Chapter section carefully. Although sometimes we take simple things for granted, we still may learn something new. The most important aspect is the vocabulary, so make sure that you understand all of the terminology used. Terms such as place value, the number line, and the communicative property are essential to comprehend. Learning Activity #5: Decimal System Review  Read Chapter 1, Section 1.1 of your Baratto textbook.  Complete the corresponding Connect assignment. Once the assignment is complete, choose “submit quiz.” Connect will record and save your grade for your facilitator’s retrieval. You will have up to three attempts for the assignment, and the best score will be used for your grade. The homework is untimed. Objective 4: Perform arithmetic operations with whole numbers. The vignette on p. 1 of the textbook is about the U.S. Census, and how gleaning factors such as age, income, education, family size and so forth help to make population growth projections. Then the city planners and other community leaders can make more informed decisions about new housing, schools, roads, and office buildings. As you can see from stories like this vignette, math impacts the lives of people every day. Learning Activity #6: Whole Number Review  Read Chapter 1, Section 1.2 – 1.6 of your textbook.  Prepare a statement of at least one thing that you learned from the reading. Online students will be posting the statement in the corresponding named discussion forum. Objective 5: Apply order of operation rules to evaluate expressions with whole numbers. We will learn to simplify expressions that contain exponents by using the Order of Operations. You must stick to the order to break down problems to solve them correctly. One useful way to remember the Order of Operations is to use a memory tool. An example includes “Please excuse my dear Aunt Sally.” This little trick reminds us of the four steps in the Order of Operations as outlined on p. 81 of your textbook: Parenthesis, Exponents, Multiplication & Division, Addition & Subtraction. It might sound silly, but it works. Learning Activity #7: Exponential Notation Review  Read Chapter 1, Section 1.7 of your textbook.  Complete the corresponding Connect assignment. Once the assignment is complete, choose “submit quiz.” Connect will record and save your grade for your facilitator’s retrieval. You will have up to three attempts for the assignment, and the best score will be used for your grade. The homework is untimed. Objective 6: Use the Sieve of Eratosthenes to identify prime numbers. Prime numbers have been an interest of mathematicians for centuries. It was not until the 1600s that it was discovered there was an infinite amount of prime numbers and to this day no one has discovered the pattern of prime numbers on the real number line. Prime numbers have exponential use in cryptology, number theory, and computer technology. This course is a building block course; therefore, you must master key concepts such as Order of Operations, prime numbers, and factoring to be able to successfully continue. Learning Activity #8: Sieve of Eratosthenes Exercise Read Chapter 2, Section 2.1 – 2.2 of your textbook.  Complete the Sieve of Eratosthenes activity, steps 1-5, found on p. 98 of your textbook, making sure to show your work.  Summarize what you noticed while working through this activity.  Complete the Check Yourself 2 from p. 98: Identify which of the following numbers are prime: 2, 6, 9, 11, 15, 19, 23, 35, 41. Objective 7: Perform basic mathematical operations with fractions. The vignette at the beginning of Chapter 2 discusses how there are many practical applications of being able to perform basic mathematical operations with fractions. Learning Activity #9: Basic Fraction Operations Review  Read Chapter 2, Section 2.3 – 2.6 of your textbook.  Complete the corresponding Connect assignment. Once each assignment is complete, choose “submit quiz.” Connect will record and save your grade for your facilitator’s retrieval. You will have up to three attempts for the assignment, and the best score will be used for your grade. The homework is untimed.