Name: _____ Class: _____ Date: _____ ID: A

Lesson #1 A: Classifying Real Numbers and Pre-Algebra Review Assignment (Reference: Lesson #1 in book)

Problem

1. **For each number, identify the subsets of real numbers to which it belongs.**

   1. $\frac{3}{4}$

   2. 60π

   3. $-\frac{2}{3}$

4. **Identify the set of numbers that best describes each situation. Explain your choice.**

   4. The number of coke cans in my refrigerator.

5. The volume of water in a rectangular swimming pool.

6. The circumference of a circular table when the diameter is a rational number.

7. The attendance clerk keeps records of students' attendance. Which subset of real numbers would include the number of students in attendance each school day?

8. **For each of the following find the Intersection ($C \cap D$) and the Union ($C \cup D$) of the two sets.**

   8. $C = \{6, 7, 10, 12, 15, 16, 19, 21\}$
      $D = \{5, 6, 7, 10, 11, 12, 19, 20, 30\}$

9. $C = \{7, 9, 11, 13, 18, 20, 22, 24\}$
   $D = \{1, 3, 5, 7, 10, 12\}$

10. **Determine whether each statement is true or false. Provide a counterexample for false statement.**

    10. The set of natural numbers is closed under subtraction.

11. The set of integers is closed under division.

12. **Evaluate and solve each of the following problems.**

    12. All natural numbers are members of which other subsets of real numbers?

13. Use braces and digit to designate the set of whole numbers?

14. Add $7\frac{3}{8}$ meters and $6\frac{1}{3}$ meters. Does the sum belong to the set of rational numbers, integers, or whole numbers? (Solve and choose the best subset that fits the answer.)

15. **Simplify/Evaluate each of the following Numerical or Variable Expressions.**

    15. $\frac{7}{15} \div \frac{21}{25}$

16. $\frac{1}{4} \cdot \frac{4}{5} \cdot \frac{20}{2}$

17. **Evaluate and solve each of the following problem.**

    17. Write 0.15 as a percentage and a fraction.

18. Find the prime factorization of 72.

19. Find the GCF of 28 and 42.

20. Write 7.2 as a percentage and as a fraction or mixed number in simplest form?