

# CHECK UP

## Pre-Algebra

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Below is a list of topics and skills that you should recognize and be able to do. Identify those that you still have difficulty.

Using your textbook and notes create 3 sample test problems for each topic. Please write the problem as well as show the work and solution.

- Simplify math expressions, according to the Order of Operations that contain Absolute Value, exponents, and multiple grouping symbols.
  - Identify the various Number Sets, and list at least 3 elements contained in each set.
  - Distinguish between Rational and Irrational square roots.
  - List multiple verbal models for each of the four operations, as well as symbols of equivalence and inequality.
  - Identify which verbal models require a reordering of the values when translated into a mathematical model.
  - Define and distinguish between Prime and Composite Numbers.
  - Identify Relatively Prime values.
  - Create the Prime Factorization of a value that contains variables.
  - Define and distinguish between a multiple and a factor of at least two values.
  - Identify the Greatest Common Factor and Least Common Multiple of at least two values that contain variables.
  - Change values between Mixed Numbers and Improper Fractions
  - Simplify algebraic fractions
  - Perform the four operations (+, -,  $\times$ ,  $\div$ ) with numerical and algebraic fractions.
  - Convert the division of a fraction to a product.
  - Multiply and factor utilizing the Distributive Property.
  - Represent exponential expressions in expanded form.
  - Represent expressions in expanded form using exponents
  - Utilize the rules of exponents, including zero and negative exponents.
  - Convert values into Scientific Notation
  - Rewrite values in Scientific Notation into values without powers of 10.
  - Distinguish between proper and improper values written in Scientific Notation.
  - Perform multiplication and division of values in Scientific Notation
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