Value: **30** extra credit points in test category

Document must be completely and correctly done for credit. **NO partial credit** will be awarded.

Requirements:

1. Create an exam review
   a. Reproduction quality
   b. Instructions must be written followed the problem
   c. Must include 2 problems of different types from each section listed on back.
   d. Total number of problems should be **60**
2. Create a solution guide (separate from review)which includes
   a. Problem
   b. All steps for solution with answer clearly marked and/or
   c. A clear explanation of the concept
3. Create another page with
   a. The review problem's number
   b. Where the problem was found (page number and problem number, other source, or your own creation)
   c. Listing as to the problem's level of difficulty (easy, moderate, hard)
4. A page stating that this is your own work with your signature.
5. General requirements:
   a. Must be your own choice and work
   b. Must be publishable
   c. Fifteen or less problems may be odd problems from the textbook **OR FROM A PREVIOUS TEST**
   d. Level of difficulty (Do not claim that they are all hard ☹)
      i. Fifteen or less easy
      ii. Fifteen or more hard
   e. No partial credit (all or none)
6. Due on 12-19-13 at the beginning of the block. NO LATE work accepted.

Selected Topics:

- Determine the domain, range, and intercepts of a function
- Determine algebraically if a function is even, odd, or neither
- Determine graphically if a function is even, odd, or neither
- Use the sign and leading coefficient to determine the end behaviors of a function
- Determine all relative maxs/mins, intervals of increasing/decreasing, points of inflection, and concavity
- Graph the rational equations stating domain, intercepts, asymptotes, and holes
- Use parent functions with transformations to graph equations of square roots, absolute value, quadratic, or cubic functions
- Graph functions that involve an inequality
- Determine the number of complex roots to a polynomial
- Determine the value of C that Completes the Square
- Determine the roots of a quadratic by completing the square
- Convert the quadratic equation to vertex form by completing the square
- Use Pascal's triangle for binomial expansion
- Use the remainder theorem to determine if a binomial is a factor of the given function
- Express each polynomial as a product of linear factors using Synthetic Division
- Write a polynomial model using the data from the table (include the value of R^2)
- Decompose each expression into partial fractions
- Determine the possible rational zeros of a polynomial
- Solve rational equations with and without inequalities
- Graph logarithmic equations using transformations (include domain, range, intercepts, and inc/dec)
- Graph exponential equations using transformations (include domain, range, intercepts, and inc/dec)
- Convert logarithmic equations to exponential equations
- Convert exponential equations to logarithmic equations
- Solve the exponential equations using the 1-1 property
- Solve the log/exp equation using a calculator
- Solve two applications of logs/exps (Compound Interest, Newton's Law of Cooling, Human Memory Model, …)
- Find the 21st term of an arithmetic or geometric sequence
- Find the sum of an arithmetic or geometric series
- Write a rule to represent the terms of a given sequence
- Determine the limit of the infinite series (if it exists)