Algebra 2A ---Trimester Exam Information

Your final exam will be on content from Chapters 1, Appendix A/B, Chapter 2, Chapter 3 and Chapter 4 as well as on items done in class that are related.

Review #1 /Prepare for Final Exam ---- Friday March 15th

Review #2 /Prepare for Final Exam ---- Monday , March 18th

> *-If you are NOT continuing on to Algebra 2B in trimester 3, then return you book by today.*

Final Exam Part 1   ---- Will be Tuesday – March 19th

> (normal type questions, where you have to show work)

Nov 29   **Thur** - **Final Exam - Part 2** - this is the official last day of class.

> This part is <u>*multiple choice.*</u>
>
> *I also hope to let you see your results from Part 1*

Final Exam Part 2

> This part is mostly multiple choice and a few no-calculator questions.

> **Wednesday, March 20th – Final Exam Part 2 for periods 2 and 4**
>
> > *You will see your results and hopefully your final grade on Thursday (30 min class)*

> **Thursday, March 21st. – Final Exam Part 2 for periods 1, 3, and 5**
>
> > *You will see your results for part 1 on Wednesday*

<u>Allowed</u>

1. Your reference sheet
2. 8.5" by 11", both sides, provided it is in your writing and it is stapled to the other sheets.

> You can have explanations about formulas or procedures.
> You may **NOT** have <u>full</u> worked examples but you can write explanations or steps written out in words.

> If you want to have worked examples, your score will be capped at 80%

Staple both of these two sheets together. Write your name on top. You will turn this "Note Packet" in with Part 1 of the test. I will return it to you at the start of Part 2.

Potential Test Items

Chapter 1

1. Find the domain and range of functions given either the equation or the graph.

2. Given the equation of a function, determine both the x- and y-intercepts using algebraic techniques *by setting x=0 or y=0*

3. Write the equation of a straight line, in slope intercept form
   - given two points or
   - given a table
   - given a graph

4. **Solve** all kinds of linear equations.
   > *For those equations with fractions and decimals, you should know how to "clear" or "eliminate" the fractions before preceeding.*

5. Show an understanding of *function notation*
   - ✓ to evaluate functions *given an input, for example f(4) = ??*
   - ✓ and to find inputs *given an output.   for example..... what is x if f(x) = 10*

6. **Factor** quadratic expressions into factors.
   - ➢ Factor out all common factors
   - ➢ Differences of squares
   - ➢ Create two binomial factors from a quadratic (can use the box method)

7. **Solve** quadratic equations:
   - by factoring and then using ZERO Product Property
   - and by using the quadratic formula

8. **Solve** a system of equations. You can choose either of the following mehtods:
   Elimination, Substitution, or Equal values method

9. **Simplify** with exponents (following exponent rules)

List of Quiz Items for Appendix A

- ✓ Write explicit formulas, in first term format and zero term format for
   - *arithmetic sequenes*
   - *geometric sequences*

- ✓ Given a table or a graph, write an exponential function in the form $y = ab^x$
- ✓ Write exponential functions from percent growth or decay situations.

Chapter 2

1. Analyze a function by stating the domain, range, any asymptotes of parent functions and their transformations.

2. Write equations of transformations given either the description of the transformation or their graph. *(to include vertical stretches or shrinks, horizontal translations, vertical translations, vertical reflections).*

3. Convert an equation of a parabola to graphing form, showing work, by *Completing the Square* or by using the *Averaging the $x-intercepts$*.

4. Perform mathematical modeling with situations involving parabolas. (including a completely labeled diagram and equation. using $y = a(x-h)^2 + k$

Chapter Three

✓ Re-write equations to make them solvable. Then solve them, using good notation.

✓ Simplify rational expressions (by factoring, then making "ones")

> Multiply and Divide Rational Expressions (only factors can cancel!, you don't need a common denominator)

> Add and Subtract Rational Expressions (*you do need a common denominator*)

✓ Graph a rational function on your calculator, then state the domain/range/asymptote equations

Chapter 4

a) **Solve a variety of equations** --- using "Un-Doing" and "Rewriting skills. (good notation and steps expected)
  - *Equations with radicals*
  - *Equations with absolute value*
  - *Equations with fraction*
  - *Equations that include terms that are squared or cubed. ie... $(x-6)^2$ or $(x-6)^3$*

  Give evidence of extraneous solutions when they exist (this means to show a check in the original equation to see if it really is a solution.

b) Use a graphing calculator to solve high level equations (not solvable other ways). *(by creating a system of equations from each side of the equation, then graphing on your calculator. you should show rough sketch.*

c) Use a graphing calculator to solve **_systems_ _of two equations_**.

d) *Write* a system of equations given a situation. Then solve it.

e) Solve one-variable **inequalities** (linear and non linear)
- by finding boundary and testing points
- by solving directly (if possible)
- by graphing on GDC (must show a labeled sketch)

f) Solve two-variable inequalities
   by first finding the boundary curve, then testing a point, then <u>shading</u> appropriately