



NEW YORK STATE MIGRANT EDUCATION PROGRAM

TITLE: Regents Prep: Algebra I in Four Sessions

DESCRIPTION: Algebra I in Four Sessions is an alternative to materials that emphasize algebraic fluency and “by hand” methods. These sessions are in favor of technology use and recognize the need to help students understand major concepts under major time constraints. These four sessions provide strategic information about the test, with fresh instruction and practice of key skills.

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Curriculum writing experience: Developed math curriculum for use by ELL students with the National PASS program. Author of *Math 6*, *Math on the Move*, and *TAKS (Texas) Exit-Level Math Review*.

REGENTS PREP SERIES: *Algebra I in Twelve Lessons* is able to spend more time with the key mathematic skills. The NYS-MEP continues to build a series of Regents Prep materials, available in the Resource Library on the www.nysmigrant.org website.

FACILITATOR GUIDE

TOPIC 1 – The Algebra I Test and Strategies to Beat it

(Approximate time: 1 hour)

Topic 1 explains how to be strategic about passing the Algebra Regents Exam. Students learn strategies to identify ten to fourteen multiple-choice questions they can get right when using the graphing calculator.

TOPIC 2 – ANALYZING FUNCTIONS USING TABLES AND GRAPHS

(Approximate time: 1 hour)

Topic 2 explains functions and how they can be represented. Students learn how to view function tables in the calculator and how to adjust the start value and how much “x” changes by. Students learn how to view graphs in the calculator, to change the window to get a better picture, and to trace an input “x” to determine and output “y.”

TOPIC 3 – FUNCTION FAMILIES

(Approximate time: 2 hours)

Topic 3 groups algebraic functions into three families. Students learn about three main families: linear, exponential, and quadratic. Topic 3 emphasizes students working to identify key similar characteristics of each function family's rule, table, and graph.

TOPIC 4 – SOME FINAL THOUGHTS

(Approximate time for the lesson: 1 hour. Additional time to answer the multiple-choice questions: 1 hours)

Students learn how to adjust the viewing window on the calculator and discuss last minute ideas that are nice to know for the exam. Students will take a blank, past Algebra I Regents Exam to decide which questions they must complete. If the extended time is available, students can practice answering the multiple-choice questions.

RESOURCES NEEDED

1. Graphing calculators
 - Students need to use graphing calculators for each topic
 - These materials use the TI-84 Plus graphing calculator.
 - Take time to check the graphing calculators you are using as the buttons might be arranged differently and use different color-coding.
 - Also see Website and Phone APP Resources below
2. Student Copy for each Topic
 - The Student Copy takes students step-by-step through the information and solutions. The student copy includes independent practice. Students each need their own copy to write on and to take home for reference.
3. Educator Copy for each topic
 - The Educator copy has everything from the student copy, plus the answers and explanations for the independent practice. This allows the Educator to work easily with the student(s)
4. June 2017 Algebra I Regents Exam to practice breaking down the exam during the lesson. (If extended time is available, students use the same exam to answer the multiple-choice questions.)
 - Exam in English
 - Exam in Spanish
 - Answer Key
 - Models for scoring student work for questions 25-37.

WEBSITE RESOURCES

www.jmap.org for past regents exams and practice questions

www.desmos.com for exploring graphs and function

<http://wabbitemu.org/> for graphing calculator (select the Select the TI-plus

PHONE APP RESOURCES

There is a wabbitemu app for phones on the **android** store.

In Google Play:

- Search for wabbitemu
- During installment, you can “skip” the choice to enter debit/credit card information.
- This has TI-84 as a choice.
 - This has the same buttons as the TI-84 Plus. However, the buttons are arranged differently than the “Plus” version, and it uses different colors for the “2nd” and “alpha” modes.

(Do not think wabbitemu is in the Apple store yet.)

PURCHASING GRAPHIC CALCULATORS

- TI-84 plus matches the diagrams and screen shots in these handouts.
- If there is money in the budget, the one with a color screen, the TI-84 Plus CE provides a good visual.