

# Algebra I "Before the Test" Topics

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## **BEFORE THE TEST**

Brainstorm with students

- special notation they have learned to use in algebra
- special terminology/vocabulary used throughout algebra
- special functions studied throughout algebra
- special characteristics associated with each function
- special rules learned in algebra
- special generalizations learned in algebra
- special strategies used to solve algebra problems
- special calculator skills used throughout algebra

Check off all standards that you believe you have taught successfully.

### American Diploma Project Algebra I Standards

<b>Number Sense and Operations and Algebraic Expressions (14 points/53 or 26%)</b>	
	Reasoning with real numbers
	Using ratios, rates, and proportions
	Using numerical radical expressions
	Using algebraic exponential expressions
	Operating with polynomial expressions
	Factoring polynomial expressions
	Using algebraic radical expressions
<b>Linear Equations and Functions and Inequalities (20 points/53 or 38%)</b>	
	Representing linear functions in multiple ways
	Analyzing linear function
	Graphing linear functions involving absolute value
	Using linear models
	Solving linear equations and inequalities
	Solving equations involving absolute value
	Graphing linear inequalities
	Solving systems of linear equations
	Modeling with single variable linear equations, one- or twovariable inequalities or systems of equations

<b>Non-Linear Functions (11 points/53 or 21%)</b>	
	Representing quadratic functions in multiple ways
	Distinguishing between function types
	Using quadratic models
	Solving literal equations
	Solving quadratic equations
<b>Data Analysis and Statistical Analysis and Probability (8 points/53 or 15%)</b>	
	Interpreting linear trends in data
	Comparing data using summary statistics
	Evaluating data-based reports in the media
	Using counting principles
	Determining probability

## Analyzing the Practice Test

Study the four standards. Place the four standards in order to indicate which standard your students are best prepared for and which they are least prepared for.

- \_\_\_\_\_ Linear Equations and Functions and Inequalities
- \_\_\_\_\_ Non-Linear Functions
- \_\_\_\_\_ Number Sense and Operations and Algebraic Expressions
- \_\_\_\_\_ Data Analysis and Statistical Analysis and Probability

Select two standards that you believe your students need more work with.

Study the content of the standards from the Achieve List. Be prepared to explain to the others the depth of knowledge the students must have for those standards.

Identify three things you think you can do in the remaining time to improve your student performance in their weakest standard.

## Studying the Questions on the Practice Test

Select four problems that you believe your students could face difficulty with if they found that problem on the EOC.

Identify two strategies that you could use with your students in the remaining time to improve their performance with those four problems.

What other questions could you pull from this year's study of Algebra that will help them be ready to answer this question, or type of question?

## Test Taking Strategies

1. Read each word problem.
  - a. Try to get a picture of what the problem is describing.
  - b. Try to estimate the answer to the problem.
  - c. Look to see if any of the answer appear to be match your estimate.  
i.e. if you are asked to answer  $48 \times 12 = ?$ , you could expect a number around 500, but if you end up with an answer around 5000, you'll know you did something wrong.

### On constructed Response Questions

1. Show all your work (especially when partial credit is awarded) and
  - a. write as legibly as possible
  - b. make sure you are answering the question asked.
2. Even if you think the final answer is wrong don't erase your entire work because you may get partial credit for using the correct procedure.

### Ideas to work on Prior to Testing Day

1. When giving practice tests help students to budget their time
  - a. Although the test is officially untimed, there are usually about 24 questions which need to be completed in about 60 minutes. This means that students have about  $2 \frac{1}{2}$  minutes per question.
  - b. Make sure can have sufficient time for all questions on the practice tests.
2. Explain the point value of questions to the students.
3. Say things to the students like:
  - a. Be positive throughout all the review for the test.
  - b. Remind students that they have learned a lot of new material.
  - c. Remind students that "They can do it. Keep modeling how they are capable of solving numerous type of questions.

### Reminders for the Day Before the Test or the Day of the Test

1. Eat before a test. Having food in your stomach will give you energy and help you focus but avoid heavy foods which can make you groggy.
2. Keep a positive attitude throughout the whole test and try to stay relaxed. If you start to feel nervous take a few deep breaths to relax.
3. Keep your eyes on your own paper, you don't want to appear to be cheating and cause unnecessary trouble for yourself.
4. When you first receive your test, do a quick survey of the entire test so that you know how to efficiently budget your time.

5. Do the easiest problems first. Don't stay on a problem that you are stuck on especially when time is a factor. After finishing the exam, use all the remaining time to re-check and proofread your exam and to work out omitted items.
6. Write legibly. If the grader can't read what you wrote, they'll most likely mark it wrong.
7. Always read the whole question carefully. Don't make assumptions about what the question might be.
8. Make sure that you understand what the question is asking you.
9. Make sure that you write down everything that is asked of you and more. The more details and facts that you write down, the higher your grade is going to be.
10. If you don't know an answer, skip it. Go on with the rest of the test and come back to it later. Other parts of the test may have some information that will help you out with that question.
11. Don't rush through any problem.
  - a. Don't assume you know what the question is asking without completely reading the question
  - b. Think of how you did problems like this during the year.
  - c. Look for keywords that will help you know how to solve the problem.
12. Don't worry if others finish before you. Focus on the test in front of you.
13. Budget your time, don't spend the entire test time on just a few questions.
14. If you have time left when you are finished, look over your test.
  - a. Make sure that you have answered all the questions, only change an answer if you misread or misinterpreted the question because the first answer that you put is usually the correct one.
  - b. Watch out for careless mistakes and proofread your essay and/or short answer questions.
15. Throughout the exam focus on remaining calm, relaxed and positive.
  - a. Make sure you are breathing regular and slowing from your lower lungs.
  - b. Relax any tight neck or shoulder muscles and push away any negative or disturbing thoughts.
  - c. Keep saying positive things to yourself.
16. When you can't answer a question
  - a. make a good educated guess
  - b. encourage students to try to using estimation to weed out some of the multiple choice answer.