

The End-of-Course Algebra Assessment

How the Numbers Add Up



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This is the first part of the training session for the End-of-Course Algebra Assessment and is the ETS nationwide presentation. This slide presentation was designed by the Educational Testing Service (ETS) and covers their guidelines for administering the End-of-Course Assessment. The notes of this presentation have been tailored to meet the needs of DoDEA for systemic administration of the End-of-Course Algebra Assessment.

What is the End-of-Course Algebra Assessment?

- A multiple-choice assessment that measures fundamental algebraic competency in first-year students by integrating concepts, processes, applications, and skills and that provides a complete profile of individual and group understanding and performance by matching items to the NCTM Algebra Standard
- A Teacher Assistance Package for teacher professional development.
- A score report that will show comparisons between students, classes, and schools within a district



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The End-of-Course Algebra Assessment is a 50 item multiple-choice assessment. The questions in this assessment were developed to provide one measure of students' understanding of some key concepts, processes, and skills of first-year algebra.

Schools throughout the country are using this assessment to:

- confirm algebra achievement of students taking a variety of course titles;
- determine group strengths and weaknesses;
- place new students in mathematics classes;
- help middle school and high school teachers jointly plan and adjust teaching strategies; and
- obtain baseline information in preparation for systemwide assessments.

What is the Teacher Assistance Package?

- Constructed-response task with analysis
- Advice on how and when to use the task
- Rubric with advice on scoring responses and samples of scored student work with explanations of assigned scores
- Ideas on how to promote student understanding of the concepts being assessed; including what to do next depending on student understanding



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Please review the *ETS Teacher Assistance Package*.

What does the test look like?

- 50 multiple-choice questions and a 5-question student survey
- Two 40-minute timed parts of 25 questions each
- Separate answer sheet



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The 5-question student survey is a “fill in the circle” survey that ask students questions about how they learn and process algebra.

Students will complete the Student Information section of the answer sheet prior to or at the start of the first testing session.

How do the NCTM standards play a role in the test?

Each multiple-choice item is matched to one of the four parts of the NCTM Algebra Standard:

- Understand patterns, relations, and functions.
- Represent and analyze mathematical situations and structures using algebraic symbols.
- Use mathematical models to represent and understand quantitative relationships.
- Analyze change in various contexts.



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Each of the 50 items in the End-of-Course Algebra Assessment are aligned with the National Council of Teachers of Mathematics (NCTM) and the DoDEA Algebra standards. The items were specifically designed to address a component of the standards.

What are the guidelines for taking the test?

- The assessment can be taken on one day over two 40-minute periods or in two days over two 40-minute periods - there should be consistency of use within a district.
- The student-information portion of the answer sheet may be filled out prior to administration of the assessment - teachers should check answer sheets for accurate and complete student information prior to administering the assessment.



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In DoDEA, the End-of-Course Algebra Assessment will be administered in two days over two 40-minute periods. Classes on a Block Schedule will take the test on the two consecutive days that the class normally meets, i.e., class periods on Monday and Wednesday will administer the assessment on Monday and Wednesday.

Students may complete the Student Information section of the test answer sheet several days before the actual test. This will save time and give teachers the opportunity to check the accuracy of the information provided by students. If this is done prior to the test session, teachers must collect the answer sheets, store them in a secure location, and redistribute them to the students on the day of the test.

All completed student answer sheets must be returned to the test coordinator.

Guidelines (cont.)

- Calculators may be used but are not necessary to take the exam - ETS strongly suggests that students not use calculators that can do symbolic manipulations. Examples of these calculators would include the TI 89, TI 92, HP 48, or HP 49. Calculator use should be consistent within a district.



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The End-of-Course Algebra Assessment has been designed with the expectation that all students have had access to calculators throughout the year. This multiple choice assessment does not require the use of calculators, but students may feel more comfortable knowing they can continue to have access to them.

General Test Directions

- Sections I and II are 40 minutes each. Each section has 25 items.
- Students who finish a section early may check their work only on that particular section.
- Students may not begin Section II until 40 minutes of testing time has been completed for Section I and the test administrator has instructed students to go on.
- Students may write in any spaces in the test books, but only the answer sheets will be scored.



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All DoDEA students will be administered the End-of-Course Algebra Assessment on two days.

- Day-1, students will be given 40 minutes to complete Section I.
- Day-2, students will be given 40 minutes to complete Section II.

Directions (cont.)

- Students may use calculators only if they are permitted by the test administrator. All district test administrators should be consistent in the decision of whether or not to permit students to use calculators.
- Credit is given only for correct answers that are properly marked on the separate answer sheet.
- Record answers by making a heavy, dark mark in the space that corresponds to the answer choice.



In DoDEA “all” students taking the End-of-Course Algebra Assessment will have access to calculators.

Directions (cont.)

- The mark must completely fill the answer space. Do not make any stray marks on the answer sheet. Erase marks completely before changing an answer.

EXAMPLE:

1. A B D



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To complete all information on the answer sheet, please instruct student to:

- use only #2 pencils
- print all information
- completely fill in each appropriate bubble
- avoid any stray marks

What should we do with the tests when they arrive?

- Count test books and answer sheets to be sure you have received your complete order.
- Students may complete the student-information portion of the answer sheet prior to the test day (refer to the Administrator's Manual for directions).
- Keep the tests in a secure area (locked closet or cabinet).



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For more information, please refer to the *ETS Administrator's Manual*.

What do the score reports tell?

- How an individual student performed on each question as well as his/her overall performance
- How each class performed
- How each school performed
- How each district performed
- Student strengths and weaknesses matched to the NCTM Algebra Standard

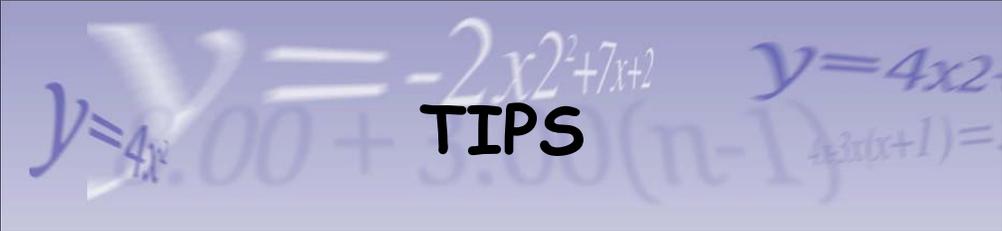


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The End-of-Course Algebra Assessment results provide one indicator of whether students can be viewed as having a solid understanding of algebraic content and methods. These results are presented to the school in four different reports:

- *Student Roster* - information about individual student performance
- *Classroom Summary* - aggregate information at the classroom level
- *School Summary* - aggregate data for all student taking the test in your school
- *All Schools Summary* - aggregate data for all students taking the assessment DoDEA wide

In addition, a district summary is provided, which aggregated data across all participating schools and districts.



TIPS

- Have the students complete the student-information portion of the answer sheet prior to the test administration date.
- Keep the assessments secure until they are ready to be administered.
- Follow the directions in the *Administrator's Manual*.



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Please see the *Administrator's Manual* for additional information.

TIPS (cont.)

- Be consistent in the administration of the assessment across classes and schools:
 - Calculator use
 - How the assessment is administered (i.e., two days or one)
 - When the assessment is administered



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- All DoDEA students will have access to calculators
- The End-of-Course Algebra Assessment will be administered in two days. Forty minutes each day.
- The End-of-Course Algebra Assessment for DoDEA will begin the week of May 13-17 and end the week of June 3-7. Please review the DoDEA test schedule for dates in your school.

Questions, Comments, Concerns

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Please review the ETS *Administrator's Manual* and Regulation 2000.6 Enclosure 6 for additional information pertaining to the End-of-Course Algebra Assessment.