

Coursework Waiver for Pre-Professional Skills Tests (PPST)

If a license holder has taken and failed any of the Praxis I: Pre-Professional Skills (PPST) tests, that license holder has the option of passing an **approved course with a grade of B-** to waive that section of the PPST. For the provision to be satisfied, the licensee must submit an official transcript and a provision removal form to the Office of Teacher Licensure.

Official transcripts must reflect that the course was taken after the failing test score was reported.

License holders who choose the coursework waiver option may choose **only** from the following three (3) credit courses which have been approved by The Commission for Professional Standards in Education.

Reading Portion of the Pre Professional Skills Test

Institution	Course Title	Course No.	Format
Community College Southern Nevada	Critical Reading	READ 135	Ground
Western Nevada Community College	College Reading Strategies	READ 135	Ground, Online
Western Nevada Community College	Reading Improvement	READ 093	Ground, Online
Truckee Meadows Community College	College Reading Skills	READ 135	Ground, Online

Writing Portion of the Pre Professional Skills Test

Institution	Course Title	Course No.	Format
University of Nevada Reno (UNR)	Composition I	Eng 101	Ground
University of Nevada Las Vegas (UNLV)	Composition I	Eng 101	Ground
Community College of Southern Nevada (CCSN)	Composition I	Eng 101	Ground
Great Basin Community College	Composition I	Eng 101	Ground, Online
Truckee Meadows Community College	Composition I	Eng 101	Ground, Online

Western Nevada Community College	Composition I	Eng 101	Ground, Online
Nova Southeastern University	Basic Writing	Comp 1000	Ground, Online
University of Phoenix	Introduction to Effective Written Communication	COMM 105	Ground
Nevada State College	Composition I	Eng 101	Ground
University of Phoenix	Essentials of College Writing	COMM 215	Ground
National University	Effective College English	ENG 100	Ground
Regis University	Essentials of Effective English	EN 200	Ground

Math Portion of the Pre Professional Skills Test

Institution	Course Title	Course No.	Format
University of Nevada Reno	Fundamentals of College Mathematics 120	Math 120	Ground
University of Nevada – Las Vegas	Fundamentals of College Mathematics	Math 120	Ground
Community College of Southern Nevada	Fundamentals of College Mathematics	Math 120	Ground
Great Basin Community College	Fundamentals of College Mathematics	Math 120	Ground, Online
Truckee Meadows Community College	Fundamentals of College Mathematics	Math 120	Ground
Western Nevada Community College	Fundamentals of College Mathematics	Math 120	Ground, Online
Nova Southeastern University	Essential Mathematics	Math 1000	Ground, Online
Sierra Nevada College	Intermediate Algebra	Math 090	Ground
University of Phoenix	College Mathematics I	MTH 208	Ground

National University	Beginning Algebra I	MTH 12A	Ground
Nevada State College	Fundamentals of College Mathematics	Math 120	Ground

Most colleges and universities post class schedules on line. Visit these websites for the most current information on course offerings.

[College of Southern Nevada](#)

[Great Basin College](#)

[National University](#)

[Nevada State College](#)

[Nova Southeastern University](#)

[Regis University](#)

[Sierra Nevada College](#)

[Truckee Meadows Community College](#)

[University of Nevada Las Vegas \(UNLV\)](#)

[University of Nevada Reno \(UNR\)](#)

[University of Phoenix](#)

[Western Nevada College](#)

4. Learn About Your Test

Learn about the specific test you will be taking

Core Academic Skills for Educators: Reading (5712)

Test at a Glance			
Test Name	Core Academic Skills for Educators: Reading		
Test Code	5712		
Time	85 minutes		
Number of Questions	56 multiple-choice questions		
Format	Multiple-choice questions based on reading passages and statements		
Test Delivery	Computer delivered		
	Content Categories	Approximate Number of Questions*	Approximate Percentage of Examination
	I. Key Ideas and Details	17–22	35%
	II. Craft, Structure, and Language Skills	14–19	30%
	III. Integration of Knowledge and Ideas	17–22	35%
<p>* Includes both scored and unscored (pretest) questions. Depending on the number of pretest questions included in each scoring category, the total number of questions in that category may vary from one form of the test to another.</p>			

About This Test

The Core Academic Skills for Educators Test in Reading measures academic skills in reading needed to prepare successfully for a career in education. All skills assessed have been identified as needed for college and career readiness, in alignment with the Common Core State Standards for Reading. In particular, there is an emphasis on skills that are critical to learning and achievement in teacher preparation programs. These skills include the ability to understand, analyze, and evaluate texts of different kinds. Varying in difficulty, the reading material on the test is drawn from a variety of subject areas and real-life situations that educated adults are likely to encounter. Each passage is followed by questions that are based on its content and that relate to reading skills. All questions can be answered by using information contained within the passage; no question requires outside knowledge of the content.

The test consists of four types of stimulus material: paired passages totaling approximately 200 words followed by four to seven questions, long passages of approximately 200 words with four to seven questions, short passages of approximately 100 words with two or three questions, and brief statements followed by a single question. Passages are drawn from both print and electronic media, such as newspapers, magazines, journals, nonfiction books, novels, online articles, and visual representations. Questions in each of the formats may pose tasks of varying difficulty and test any of the skills identified in the Topics Covered section.

This test may contain questions that will not count toward your score.

Topics Covered

Representative descriptions of topics covered in each category are provided below.

I. Key Ideas and Details

- A. Read closely to determine what a text says explicitly and to make logical inferences from it; connect insights gained from specific details to an understanding of the text as a whole; attend to important distinctions the author makes and to any gaps or inconsistencies in the account; determine where the text leaves matters uncertain
 1. Draw inferences and implications from the directly stated content of a reading selection
- B. Determine central ideas or themes of a text and analyze their development; identify accurate summaries of key supporting details and ideas
 1. identify summaries or paraphrases of the main idea or primary purpose of a reading selection
 2. identify summaries or paraphrases of the supporting ideas and specific details in a reading selection
- C. Identify how and why individuals, events, or ideas interact within a text; determine how an idea or detail informs an author's argument

II. Craft, Structure, and Language Skills

- A. Interpret words and phrases as they are used in a text and recognize how specific word choices shape meaning or tone
 1. determine the author's attitude toward material discussed in a reading selection
- B. Analyze the structure of a text, including how specific parts of a text relate to each other and to the whole to contribute to meaning
 1. identify key transition words and phrases in a reading selection and how they are used
 2. identify how a reading selection is organized in terms of cause/effect, compare/contrast, problem/solution, etc.
- C. Assess how point of view or purpose shapes the content and style of a text
 1. determine the role that an idea, reference, or piece of information plays in an author's discussion or argument
- D. Apply knowledge of language to understand how language functions in different contexts and to comprehend more fully when reading
 1. determine whether information presented in a reading selection is presented as fact or opinion
- E. Determine the meaning of unknown and multiple-meaning words and phrases by using context clues
 1. identify the meanings of words as they are used in the context of a reading selection
- F. Understand figurative language and nuances in word meanings
- G. Understand a range of words and phrases sufficient for reading at the college and career readiness level

III. Integration of Knowledge and Ideas

- A. Analyze content presented in diverse media and formats, including visually and quantitatively, as well as in words
 - 1. answer questions about texts that include visual representations
- B. Identify and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence
 - 1. identify the relationship among ideas presented in a reading selection
 - 2. determine whether evidence strengthens, weakens, or is relevant to the arguments in a reading selection
 - 3. determine the logical assumptions upon which an argument or conclusion is based
 - 4. draw conclusions from material presented in a reading selection
- C. Analyze how two or more texts address similar themes or topics in order to build knowledge and/or compare the approaches the authors take
 - 1. recognize or predict ideas or situations that are extensions of or similar to what has been presented in a reading selection
 - 2. apply ideas presented in a reading selection to other situations

OLD PPST

Computerized Pre-Professional Skills Test: Reading (5710)

Test at a Glance

Test Name	Computerized Pre-Professional Skills Test: Reading		
Test Code	5710		
Time	75 minutes		
Number of Questions	46		
Format	Multiple-choice questions based on reading passages and statements		
	Content Categories	Approximate Number of Questions	Approximate Percentage of Examination
	I. Literal Comprehension	21	45%
	II. Critical and Inferential Comprehension	25	55%

About this test

The Computerized Pre-Professional Skills Test in Reading measures the ability to understand, analyze, and evaluate written texts. Varying in difficulty, the reading material is drawn from a variety of subject areas and real-life situations that educated adults are likely to encounter. Each passage is followed by questions that are based on its content and that relate to a variety of reading skills. All questions can be answered by using information contained within the passage; no question requires outside knowledge of the content.

The test consists of three types of stimulus material: long passages of approximately 200 words with four to seven questions, short passages of approximately 100 words with two or three questions, and brief statements followed by a single question. Passages are drawn from both print and electronic media, such as newspapers, magazines, journals, nonfiction books, novels, online articles, and visual representations. Questions in each of the three formats may pose tasks of varying difficulty and test any of the skills identified in the Topics Covered section.

This test may contain some questions that will not count toward your score.

Topics Covered

Representative descriptions of topics covered in each category are provided below.

I. Literal Comprehension

Literal comprehension content measures the ability to understand accurately and completely what is directly stated in a written message.

- Main Ideas
 - Identify summaries or paraphrases of the main idea or primary purpose of a reading selection
- Supporting Ideas
 - Identify summaries or paraphrases of the supporting ideas and specific details in a reading selection
- Organization
 - Identify how a reading selection is organized in terms of cause/effect, compare/contrast, problem/solution, etc.
 - Identify key transition words and phrases in a reading selection and how they are used
- Vocabulary in Context
 - Identify the meanings of words as they are used in the context of a reading selection

II. Critical and Inferential Comprehension

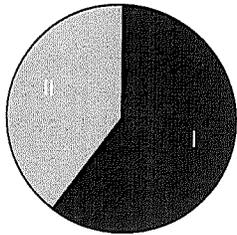
Critical and inferential comprehension content measures the ability to evaluate a reading selection and its messages.

- Evaluation
 - Determine whether evidence strengthens, weakens, or is relevant to the arguments in a reading selection
 - Determine the role that an idea, reference, or piece of information plays in an author's discussion or argument
 - Determine whether information presented in a reading selection is presented as fact or opinion
 - Identify the relationship among ideas presented in a reading selection
- Inferential Reasoning
 - Draw inferences and implications from the directly stated content of a reading selection
 - Determine the logical assumptions upon which an argument or conclusion is based
 - Determine the author's attitude toward material discussed in a reading selection
- Generalization
 - Recognize or predict ideas or situations that are extensions of or similar to what has been presented in a reading selection
 - Draw conclusions from material presented in a reading selection
 - Apply ideas presented in a reading selection to other situations

4. Learn About Your Test

Learn about the specific test you will be taking

Core Academic Skills for Educators: Writing (5722)

Test at a Glance			
Test Name	Core Academic Skills for Educators: Writing		
Test Code	5722		
Time	100 minutes, divided into a 40-minute multiple-choice section and two 30-minute essay sections		
Number of Questions	40 multiple-choice questions and two essay questions		
Format	Multiple-choice questions involving usage, sentence correction, revision in context, and research skills; 2 essay topics as the basis for writing samples		
Test Delivery	Computer delivered		
	Content Categories	Approximate Number of Questions*	Approximate Percentage of Examination
	I. Text Types, Purposes, and Production II. Language and Research Skills for Writing	6–12 multiple-choice 2 essay 28–34 multiple-choice	60% 40%
* Includes both scored and unscored (pretest) questions. Depending on the number of pretest questions included in each scoring category, the total number of questions in that category may vary from one form of the test to another.			

Note: On your score report, points earned on the multiple-choice section of the test are reported separately from points earned on the essay sections of the test.

About This Test

The Core Academic Skills for Educators Test in Writing measures academic skills in writing needed to prepare successfully for a career in education. All skills assessed have been identified as needed for college and career readiness, in alignment with the Common Core State Standards for Writing.

The Writing test is 100 minutes in length and has three separately timed sections: a 40-minute multiple-choice section containing 40 multiple-choice questions and two 30-minute essay sections that each require a response based on an essay topic. This test may contain some questions that will not count toward your score.

The multiple-choice section is designed to measure examinees' ability to use standard written English correctly and effectively. This section is divided into four parts: usage, sentence correction, revision in context, and research skills. In the usage questions, examinees are asked to recognize errors in mechanics, in structural

and grammatical relationships, and in idiomatic expressions or word choice. They are also asked to recognize sentences that have no errors and that meet the conventions of standard written English. The sentence correction questions require examinees to select, from among the choices presented, the best way to restate a certain phrase or sentence by using standard written English; in some cases, the phrase or sentence is correct and most effective as stated. Examinees are not required to have a knowledge of formal grammatical terminology. In the revision-in-context questions, examinees are asked to recognize how a passage with which they are presented can be strengthened through editing and revision. Revision-in-context questions require examinees to consider development, organization, word choice, style, tone, and the conventions of standard written English. In some cases, the indicated portion of a passage will be most effective as it is already expressed and thus will require no changes.

In the research skills questions, examinees are asked to recognize effective research strategies, recognize the different elements of a citation, recognize information relevant to a particular research task, and assess the credibility of sources.

The two essays assess examinees' ability to write effectively in a limited period of time. The Argumentative essay topic invites examinees to draw from personal experience, observation, or reading to support a position with specific reasons and examples. The Informative/Explanatory essay topic asks examinees to extract information from two provided sources to identify important concerns related to an issue.

The topics for the Argumentative and Informative/Explanatory essays attempt to present situations that are familiar to all educated people; no topic will require any specialized knowledge other than an understanding of how to write effectively in English.

Examinees should write only on the topic assigned for each essay task, address all the points presented in the topic, and support generalizations with specific examples. For the Informative/Explanatory essay, examinees should also draw information from both sources, making sure to cite the source of the information. Before beginning to write each essay, examinees should read the topic and organize their thoughts carefully.

Experienced teachers read and evaluate each essay holistically (i.e., with a single score for overall quality) under carefully controlled conditions designed to ensure fair and reliable scoring. Acknowledging that writing comprises a number of features that are not independent of one another, scorers base their judgments on an assessment of such features as quality of insight or central idea, clarity, consistency of point of view, cohesiveness, strength and logic of supporting information, rhetorical force, appropriateness of diction and syntax, and correctness of mechanics and usage. In addition, for the Informative/Explanatory essay, scorers will also evaluate the examinees' ability to synthesize information from the provided sources and to cite this information in the essay.

Topics Covered

Representative descriptions of topics covered in each category are provided below.

I. Text Types, Purposes, and Production

A. Text Production: Writing Arguments

1. Produce an argumentative essay to support a claim using relevant and sufficient evidence
2. Write clearly and coherently
 - a. address the assigned task appropriately for an audience of educated adults
 - b. organize and develop ideas logically, making coherent connections between them
 - c. provide and sustain a clear focus or thesis
 - d. use supporting reasons, examples, and details to develop clearly and logically the ideas presented
 - e. demonstrate facility in the use of language and the ability to use a variety of sentence structures
 - f. construct effective sentences that are generally free of errors in standard written English

B. Text Production: Writing Informative/ Explanatory Texts

1. Produce an informative/explanatory essay to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content
 - a. write clearly and coherently
 - b. address the assigned task appropriately for an audience of educated adults
 - c. draw evidence from informational texts to support analysis
 - d. organize and develop ideas logically, making coherent connections between them
 - e. synthesize information from multiple sources on the subject
 - f. integrate and attribute information from multiple sources on the subject, avoiding plagiarism
 - g. provide and sustain a clear focus or thesis
 - h. demonstrate facility in the use of language and the ability to use a variety of sentence structures
 - i. construct effective sentences that are generally free of errors in standard written English

C. Text Production: Revision

1. Develop and strengthen writing as needed by revising and editing
 - a. recognize how a passage can be strengthened through editing and revision
 - apply knowledge of language to understand how language functions in different contexts and to make effective choices for meaning or style
 - > choose words and phrases for effect
 - > choose words and phrases to convey ideas precisely
 - > maintain consistency in style and tone

II. Language and Research Skills for Writing

A. Language Skills

1. Demonstrate command of the conventions of standard English grammar and usage
 - a. grammatical relationships
 - recognize and correct:
 - errors in the use of adjectives and adverbs
 - errors in noun-noun agreement
 - errors in pronoun-antecedent agreement
 - errors in pronoun case
 - errors in the use of intensive pronoun
 - errors in pronoun number and person
 - vague pronouns
 - errors in subject-verb agreement
 - inappropriate shifts in verb tense
 - b. structural relationships
 - recognize and correct:
 - errors in the placement of phrases and clauses within a sentence
 - misplaced and dangling modifiers
 - errors in the use of coordinating and subordinating conjunctions
 - fragments and run-ons
 - errors in the use of correlative conjunctions
 - errors in parallel structure
 - c. word choice
 - recognize and correct:
 - errors in the use of idiomatic expressions
 - errors in the use of frequently confused words
 - wrong word use
 - redundancy
 - d. No Error
 - recognize:
 - sentences free of errors in the conventions of standard English grammar and usage
2. Demonstrate command of the conventions of standard English capitalization and punctuation
 - a. mechanics
 - recognize and correct:
 - errors in capitalization
 - errors in punctuation
 - > commas (e.g., the use of a comma to separate an introductory element from the rest of the sentence)
 - > semicolons (e.g., the use of a semicolon [and perhaps a conjunctive adverb] to link two or more closely related independent clauses)

- > apostrophes (e.g., the use of an apostrophe to form contractions and frequently occurring possessives)
- b. no error
 - recognize sentences free of errors in the conventions of standard English capitalization and punctuation

B. Research Skills

1. Recognize and apply appropriate research skills and strategies
 - a. assess the credibility and relevance of sources
 - b. recognize the different elements of a citation
 - c. recognize effective research strategies
 - d. recognize information relevant to a particular research task

OLD PPST

Computerized Pre-Professional Skills Test: Writing (5720)

Test at a Glance

Test Name	Computerized Pre-Professional Skills Test: Writing		
Test Code	5720		
Time	68 minutes, divided into a 38-minute multiple-choice section and a 30-minute essay section		
Number of Questions	44 multiple-choice questions, 1 essay question		
Format	Multiple-choice questions involving usage and sentence correction; essay topic as a basis for a writing sample		
	Content Categories	Approximate Number of Questions	Approximate Percentage of Examination
	<ul style="list-style-type: none"> I. Grammatical Relationships II. Structural Relationships III. Word Choice and Mechanics IV. Essay 	<ul style="list-style-type: none"> 15 16 13 1 	<ul style="list-style-type: none"> 17% 18.5% 14.5% 50%

About this test

The Computerized Pre-Professional Skills Test in Writing assesses the ability to use grammar and language appropriately and the ability to communicate effectively in writing; these abilities are essential to a well-educated adult in a professional role. The Writing test is 68 minutes in length and has two separately timed sections: a 38-minute multiple-choice section containing 44 multiple-choice questions on the use of standard English and a 30-minute essay section that requires a writing sample based on an essay topic.

The multiple-choice section is designed to measure an examinee's ability to use standard written English correctly and effectively. This section is divided into two parts: usage and sentence correction. In the usage questions, examinees are asked to recognize errors in mechanics, in structural and grammatical relationships, and in idiomatic expressions or word choice and they are also asked to identify sentences that have no error and that meet the conventions of standard written English. The sentence correction questions require examinees to select, from among the choices presented, the best way to restate a certain phrase or sentence by using standard written English; in some cases, the phrase or sentence is correct and most effective as stated. Examinees are not required to have a knowledge of formal grammatical terminology.

The essay section assesses an examinee's ability to write effectively in a limited period of time. The essay topic invites examinees to draw from personal experience, observation, or reading to support a position with specific reasons and examples.

This test may contain some questions that will not count toward your score.

The topics attempt to present situations that are familiar to all educated people; no topic will require any specialized knowledge other than an understanding of how to write effectively in English.

Examinees should write only on the topic assigned, address all the points presented in the topic, and support generalizations with specific examples. Before beginning to write, examinees should read the topic and organize their thoughts carefully.

Experienced teachers read and evaluate each essay holistically (that is, with a single score for overall quality) under carefully controlled conditions designed to ensure fair and reliable scoring. Acknowledging that writing comprises a number of features that are not independent of one another, scorers base their judgments on an assessment of such features as quality of insight or central idea, clarity, consistency of point of view, cohesiveness, strength and logic of supporting information, rhetorical force, appropriateness of diction and syntax, and correctness of mechanics and usage.

Topics Covered

Representative descriptions of topics covered in each category are provided below.

In the multiple-choice section, some questions will not contain an error; such questions are considered No Error questions. All of the No Error questions will be reported in Category III.

I. Grammatical Relationships

- Identify Errors in
 - Adjectives
 - Adverbs
 - Nouns
 - Agreement
 - Pronouns
 - Agreement
 - Proper use
 - Verbs
 - Agreement
 - Form
 - Tense

II. Structural Relationships

- Identify Errors in
 - Comparison
 - Coordination
 - Correlation
 - Negation
 - Parallelism
 - Subordination

III. Word Choice and Mechanics

- Identify Errors in
 - Word Choice
 - Idiomatic expressions
 - Commonly confused words
 - Wrong word use
 - Redundancy
 - Mechanics
 - Capitalization
 - Punctuation
 - Commas
 - Semicolons
 - Apostrophes
- Identify sentences free from error

IV. Essay

- Write an essay that is appropriate for the assigned task and for an audience of educated adults
- Organize and develop ideas logically, making clear connections between them
- Provide and sustain a clear focus or thesis
- Use supporting reasons, examples, and details to develop clearly and logically the ideas presented in the essay
- Demonstrate facility in the use of language and the ability to use a variety of sentence structures
- Construct effective sentences that are generally free of errors in standard written English

4. Learn About Your Test

Learn about the specific test you will be taking

Core Academic Skills for Educators: Mathematics (5732)

Test at a Glance			
Test Name	Core Academic Skills for Educators: Mathematics		
Test Code	5732		
Time	85 minutes		
Number of Questions	56		
Format	Multiple-choice question—select one answer choice Multiple-choice question—select one or more answer choices Numeric entry questions On-screen calculator available		
Test Delivery	Computer delivered		
	Content Categories	Approximate Number of Questions*	Approximate Percentage of Examination
	I. Number and Quantity II. Algebra and Functions III. Geometry IV. Statistics and Probability	17 17 11 11	30% 30% 20% 20%
* Includes both scored and unscored (pretest) questions. Depending on the number of pretest questions included in each scoring category, the total number of questions in that category may vary from one form of the test to another.			

About This Test

The Core Academic Skills for Educators test in Mathematics measures academic skills in mathematics needed to prepare successfully for a career in education. All skills assessed have been identified as needed for college and career readiness, in alignment with the Common Core State Standards for Mathematics. The test will cover four major content areas: Number and Quantity, Algebra and Functions, Geometry, and Statistics and Probability. Focus is on key concepts of mathematics and the ability to solve problems and to reason in a quantitative context. Many of the problems require the integration of multiple skills to achieve a solution.

In Number and Quantity, the understanding of order among integers, representation of a number in more than one way, place value, properties of whole numbers, equivalent computational procedures, ratio, proportion, and percent are emphasized. Algebra assesses the ability to handle equations and inequalities, recognition of various ways to solve a problem, relationship between verbal and symbolic expressions, and graphs. Functions questions test the knowledge of basic function definitions and the relationship between the domain and range of any given functions.

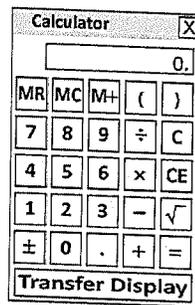
Geometry assesses the understanding and application of the characteristics and properties of geometric shapes, the Pythagorean theorem, transformation, and use of symmetry to analyze mathematical situations. Knowledge of basic U.S. customary and metric systems of measurement is assumed. Statistics and Probability assesses the ability to read and interpret visual display of quantitative information, understand the correspondence between data and graph, make inferences from a given data display, determine mean, median, and mode, and assign a probability to an outcome.

The test is 85 minutes long and contains 56 questions. This test may contain questions that will not count toward your score. The responses to the pretest questions are used to gauge the statistical performance of each question before its use as a question that will count toward your official score.

The test will contain several types of questions:

- **Multiple-choice question—select one answer choice:** These questions are multiple-choice questions that ask you to select only one answer choice from a list of five choices.
- **Multiple-choice question—select one or more answer choices:** These questions are multiple-choice questions that ask you to select one or more answer choices from a list of choices. A question may or may not specify the number of choices to select. These questions are marked with square boxes besides the answer choices, not circles or ovals.
- **Numeric entry questions:** Questions of this type ask you to enter your answer as an integer or a decimal in a single answer box, or to enter it as a fraction in two separate boxes—one for the numerator and one for the denominator. In the computer-based test, use the computer mouse and keyboard to enter your answer.

An on-screen calculator, shown below, is available for this test. The Transfer Display button can be used on numeric entry questions with a single answer box to transfer the calculator display to the answer box.



Please consult the [Praxis Calculator Use web page](#) for further information, and review the [directions for using the on-screen calculator](#).

Topics Covered

Representative descriptions of topics covered in each category are provided below.

I. Number and Quantity

A. Ratios and Proportional Relationships

1. Understand ratio concepts and use ratio reasoning to solve problems
2. Analyze proportional relationships and use them to solve real-world and mathematical problems

B. The Real Number System

1. Apply understanding of multiplication and division to divide fractions by fractions
2. Compute fluently with multi-digit numbers and find common factors and multiples
3. Apply understanding of operations with fractions to add, subtract, multiply, and divide rational numbers
4. Know that there are numbers that are not rational, and approximate them by rational numbers
5. Work with radicals and integer exponents

C. Quantities

1. Reason quantitatively and use units to solve problems

II. Algebra and Functions

A. Seeing Structure in Expressions

1. Apply understanding of arithmetic to algebraic expressions
2. Solve real-life and mathematical problems using numerical and algebraic expressions
3. Use properties of operations to generate equivalent expressions

B. Reasoning with Equations and Inequalities

1. Understand the connections between proportional relationships, lines, and linear equations
2. Understand solving equations as a process of reasoning and explain the reasoning
3. Reason about and solve one-variable equations and inequalities
4. Solve equations and inequalities in one variable
5. Analyze and solve linear equations and pairs of simultaneous linear equations
6. Represent and solve equations and inequalities graphically

C. Functions

1. Interpreting functions
2. Building functions

III. Geometry

A. Congruence and Similarity

1. Draw, construct, and describe geometrical figures and describe the relationships between them
2. Experiment with transformations in the plane

B. Right Triangles

1. Understand and apply the Pythagorean theorem

C. Circles

1. Understand and apply theorems about circles

D. Geometric Measurement and Dimension

1. Solve real-life and mathematical problems involving angle measure, area, surface area, and volume
2. Explain volume formulas and use them to solve problems

E. Modeling with Geometry

1. Apply geometric concepts in modeling situations

IV. Statistics and Probability

A. Basic Statistics and Probability

1. Develop understanding of statistical variability
2. Summarize and describe distributions
3. Use random sampling to draw inferences about a population
4. Investigate chance processes and develop, use, and evaluate probability models
5. Investigate patterns of association in bivariate data

B. Interpreting Categorical and Quantitative Data

1. Summarize, represent, and interpret data on a single count or measurement variable
2. Interpret linear models

C. Making Inferences and Justifying Conclusions

1. Understand and evaluate random processes underlying statistical experiments

D. Using Probability to Make Decisions

1. Use probability to evaluate outcomes of decisions

OLD PPST

Computerized Pre-Professional Skills Test: Mathematics (5730)

<i>Test at a Glance</i>			
Test Name	Computerized Pre-Professional Skills Test: Mathematics		
Test Code	5730		
Time	75 minutes		
Number of Questions	46		
Format	Multiple-choice questions (Calculators prohibited)		
	Content Categories	Approximate Number of Questions	Approximate Percentage of Examination
	I. Number and Operations	15	32.5%
	II. Algebra	9	20%
	III. Geometry and Measurement	10	22.5%
	IV. Data Analysis and Probability	12	25%

About This Test

The Computerized Pre-Professional Skills Test in Mathematics measures those mathematical skills and concepts that an educated adult might need. It focuses on the key concepts of mathematics and on the ability to solve problems and to reason in a quantitative context. Many of the problems require the integration of multiple skills to achieve a solution.

The test questions are from four content categories: number and operations, algebra, geometry and measurement, and data analysis and probability.

Computation is held to a minimum, and few technical words are used. Terms such as area, perimeter, ratio, integer, factor, and prime number are used because it is assumed that these are commonly encountered in the mathematics all examinees have studied. Figures are drawn as accurately as possible and lie in a plane unless otherwise noted.

This test may contain some questions that will not count toward your score.

Topics Covered

Representative descriptions of topics covered in each category are provided below.

I. Number and Operations

- Order
 - Demonstrate an understanding of order among integers, fractions, and decimals
- Equivalence
 - Demonstrate an understanding that a number can be represented in more than one way
- Numeration and Place Value
 - Demonstrate an understanding of place value, how numbers are named, and order of magnitude of numbers
- Number Properties
 - Demonstrate an understanding of the properties of whole numbers without necessarily knowing the names of the properties
- Operation Properties
 - Demonstrate an understanding of the properties—commutative, associative, and distributive—of the basic operations of addition, subtraction, multiplication, and division
 - Recognize equivalent computational procedures
- Computation
 - Perform computations
 - Adjust the result of a computation to fit the context of a problem
 - Identify numbers or information or operations needed to solve a problem
- Estimation
 - Estimate the result of a calculation
 - Determine the reasonableness of an estimate
- Ratio, Proportion, and Percent
 - Solve problems involving ratio, proportion, and percent
- Numerical Reasoning
 - Logical connectives and quantifiers: interpret statements that use logical connectives (and, if-then) as well as quantifiers (some, all, none)
 - Validity of arguments: use deductive reasoning to determine whether an argument (a series of statements leading to a conclusion) is valid or invalid
 - Generalization: identify an appropriate generalization, an example that disproves an inappropriate generalization, or a hidden assumption

II. Algebra

- Equations and Inequalities
 - Solve simple equations and inequalities
 - Predict the outcome of changing some number or condition in a problem
- Algorithmic Thinking
 - Demonstrate an understanding of the algorithmic point of view; that is, follow a given procedure or flowchart
 - Recognize various ways to solve a problem
 - Identify, complete, or analyze a procedure
- Patterns
 - Discover patterns in a procedure
 - Identify and recognize patterns in data
 - Demonstrate an understanding of direct, inverse, and other kinds of variation without necessarily knowing the correct term for the relationship
- Algebraic Representations
 - Explore relationships between verbal or symbolic expressions and graphs
 - Use symbolic algebra to represent situations and to solve problems
- Algebraic Reasoning
 - Logical connectives and quantifiers: interpret statements that use logical connectives (and, if-then) as well as quantifiers (some, all, none)
 - Validity of arguments: use deductive reasoning to determine whether an argument (a series of statements leading to a conclusion) is valid or invalid
 - Generalization: identify an appropriate generalization, an example that disproves an inappropriate generalization, or a hidden assumption

III. Geometry and Measurement

Geometry

- Geometric Properties
 - Understand and apply the characteristics and properties of two-dimensional geometric shapes
 - Use geometric relationships such as the Pythagorean relationship, congruence, and similarity
 - Apply transformations or use symmetry to analyze mathematical situations

- The xy -Coordinate Plane
 - Use coordinate geometry to represent geometric concepts
- Geometric Reasoning
 - Logical connectives and quantifiers: interpret statements that use logical connectives (and, if-then) as well as quantifiers (some, all, none)
 - Validity of arguments: use deductive reasoning to determine whether an argument (a series of statements leading to a conclusion) is valid or invalid
 - Generalization: identify an appropriate generalization, an example that disproves an inappropriate generalization, or a hidden assumption

Measurement

- Systems of Measurement
 - Demonstrate basic literacy in both the U.S. customary and metric systems of measurement
 - Convert from one unit to another within the same system
 - Recognize and use appropriate units of measure
 - Read a graduated scale
- Measurement
 - Determine the measurements needed to solve a problem
 - Recognize and use geometric concepts in making linear, area, and volume measurements
 - Solve measurement problems by using a formula, estimating, employing indirect measurement, using rates as measures, making visual comparisons, using scaling or proportional reasoning, or using a nonstandard unit

IV. Data Analysis and Probability

- Data Interpretation
 - Read and interpret visual displays of quantitative information, such as bar graphs, line graphs, pie charts, pictographs, tables, stem-and-leaf plots, scatterplots, schedules, and Venn and other diagrams
- Data Representation
 - Understand the correspondence between data sets and their graphic representations
- Trends and Inferences
 - Make observations, comparisons, and predictions or extrapolations from a given data display
 - Draw conclusions or make inferences from a given data display
- Measures of Center and Spread
 - Determine mean, median, mode(s), and range
- Probability
 - Interpret numbers used to express simple probability
 - Assign a probability to a possible outcome