

About Your Study Plan

This Study Plan is your syllabus for the American Board program. We encourage you to use the recommended resources to target preparation to your needs and goals. There will be hyper-links throughout this document to both your [Mathematics Study Materials](#) and additional, optional resources. Please make sure that you visit the relevant pages to access all of the resources. Your commitment to great teaching begins here and now. Your efforts will not only help you pass the test, but will also prepare you to become a successful teacher.

How to Study

American Board is committed to making sure you are the best possible teacher you can be. We will provide you with study tips to get ready for the exam and both the content and resources to review this material. It is your job to commit to preparing and stay dedicated while studying.

Take advantage off our exam preparation webinars. They go over how to best prepare for a multiple choice examination. We have found that those who watch our webinars have a much higher pass rate on the American Board exams.

Your Materials

- **Standards:** a list of everything that might be on the test.
- **Study Plan:** your syllabus with links to what you need to study for each section.
- **Study Materials:** an overview course materials on topics you will be tested on.
- **Practice Exam/Section Quizzes:** sample test questions and solutions.

Mathematics Exam Snapshot

|                                                                                                   |                                       |
|---------------------------------------------------------------------------------------------------|---------------------------------------|
| Time Allowed                                                                                      | 240 minutes                           |
| Format                                                                                            | Multiple Choice                       |
| # of Questions                                                                                    | 125                                   |
| On-Screen Exhibits                                                                                | None                                  |
| Passing Score                                                                                     | Proficient: 272<br>Distinguished: 340 |
| (The number of questions answered correctly is converted to a scale score ranging from 0 to 500.) |                                       |

|              |                                            |                                       |
|--------------|--------------------------------------------|---------------------------------------|
| Exam Summary | Content Domains                            | Approximate Percentage of Examination |
|              | Number Sense                               | 12%                                   |
|              | Algebra and Functions                      | 26%                                   |
|              | Geometry and Measurement                   | 20%                                   |
|              | Trigonometry                               | 11%                                   |
|              | Probability, Statistics, and Data Analysis | 12%                                   |
|              | Linear Algebra                             | 6%                                    |
|              | Calculus                                   | 13%                                   |

About This Exam

The American Board for Certification of Teacher Excellence believes that highly skilled mathematics teachers should possess a comprehensive body of mathematical knowledge that is research-based and promotes student achievement.

The mathematics exam is a rigorous assessment of a candidate’s knowledge and application of mathematic concepts. Most topics assessed are characteristically covered in introductory college level mathematics courses, although some more advanced topics are included, as teachers must hold a more sophisticated understanding of mathematics content than that presented to their students. **Use of a calculator is not permitted.**

How to Use American Board Practice Tests

If you have chosen to use our practice tests, you may have already used the quizzes to get a better idea of where your strengths and weaknesses are. There are two full-length exams that we would suggest *you use* as a mid-term and final to work on your timing and endurance. You can use them again to identify distractors.

The Study Plan:

Your study plan includes direction on how to use American Board’s resources. We also include recommended resources to aid in your mastery.

This plan was designed for a 9 month period (4 months for Professional Teaching Knowledge (PTK); 4 months for the subject matter; 2 weeks to take each test) in which most people are able to complete the program. Many candidates have completed the program in a shorter amount of time.

| Area of Study                                                                                                                    | Required Resources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Recommended Resources                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <p><b>Domain (Standards 1.1.01-1.1.25)</b></p> <p><b>These Standards cover:</b></p> <p><input type="checkbox"/> Number Sense</p> | <p><b>Complete the following readings and watch the following videos in the Mathematics Study Materials (PDF or Online version) to learn the material to understand these standards:</b></p> <p><input type="checkbox"/> Real Number Properties</p> <p><input type="checkbox"/> Fundamental Theorem of Arithmetic</p> <p><input type="checkbox"/> Absolute Values</p> <p><input type="checkbox"/> Algebraic Expressions</p> <p><input type="checkbox"/> Complex Numbers</p> <p><input type="checkbox"/> Operations with Real Numbers</p> <p><input type="checkbox"/> Field Properties with Real Numbers</p> | <p><b>Web Resources</b></p> <p><input type="checkbox"/> <a href="#">SparkNotes Math Study Guides</a></p> |

Your Notes:

**Note:** The resources recommended outside of the American Board program are often freely accessible online and can be found in your library. To make it easier for you, we have hyper-linked them in this study plan.

## Study Tip:

One effective way of using the practice quizzes is to look at the incorrect answer choices before looking at the correct explanation to see if you can understand why those options are wrong. If you can understand how a test maker uses distractors, you will be able to eliminate wrong answer choices faster on test day.

| Area of Study                                                                                                                    | Required Resources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Recommended Resources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Domain 2 (Standards 2.1.01-2.1.31)</b><br><br><b>These Standards cover:</b><br><input type="checkbox"/> Algebra and Functions | <b>Complete the following readings and watch the following videos in the Mathematics Study Materials (PDF or Online version) to learn the material to understand these standards:</b><br><br><b>Algebra and Functions I</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Parallel and Perpendicular Lines</li> <li><input type="checkbox"/> Absolute Values</li> <li><input type="checkbox"/> Relations and Functions</li> <li><input type="checkbox"/> Solving Systems of Equations</li> <li><input type="checkbox"/> Compositions and Inverses of Functions</li> <li><input type="checkbox"/> Sequences and Series</li> <li><input type="checkbox"/> Solving Linear Equations and Inequalities</li> <li><input type="checkbox"/> Graphing Linear Equations and Inequalities</li> <li><input type="checkbox"/> Finding the Equation of a Line</li> </ul> <b>Algebra and Functions II</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Algebraic Functions</li> <li><input type="checkbox"/> Factoring Polynomials</li> <li><input type="checkbox"/> Simplifying Rational Polynomials</li> <li><input type="checkbox"/> Solving and Graphing Quadratic Equations</li> <li><input type="checkbox"/> Binomial Expansion</li> <li><input type="checkbox"/> Conic Sections</li> <li><input type="checkbox"/> Laws of Integral Exponents</li> <li><input type="checkbox"/> Laws of Fractional Exponents</li> <li><input type="checkbox"/> Exponential Functions</li> </ul> | <b>Web Resources</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> <a href="#">SparkNotes Math Study Guides</a></li> <li><input type="checkbox"/> <a href="#">Algebra I Tutorials</a></li> <li><input type="checkbox"/> <a href="#">AlgebraHelp.com Calculators</a></li> </ul> <b>Books</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> <a href="#">The Complete Idiot's Guide to Algebra</a></li> <li><input type="checkbox"/> <a href="#">Schaum's Outline of Intermediate Algebra</a></li> </ul> |

## Your Notes:

*"I can give children the inspiration and encouragement to confront their own challenges, surpass negativity and persevere....Without this program, I wouldn't have had the opportunity to pursue teaching."*

—Traci Brown, American Board Teacher