



# WGU Guide for Secondary Math Praxis and State Content Tests

*Updated by WGU Secondary Education Math and Math Center Faculty*

## Start here...

This guide will help you get started with your Praxis or state content test study with free online learning resources. These resources are aimed at learners planning to teach math for middle grades and math for grades 9-12. Another WGU Guide has been prepared for elementary science teacher candidates. Work with a tutor if you can. Rely on your WGU Mentor to help you stay on track with program requirements and deadlines. Passing high-stakes standardized tests is a team effort – you are not alone!

## What are the topics covered in the guide?

Topics covered in this guide are:

- [FAQs: What to expect from any Math Praxis or State Content Test](#)
- **Discipline specific content**
  - [Middle School Mathematics \(5164\)](#)
  - [Mathematics \(5165\)](#)

## FAQs: What to expect from any Math Praxis or State Content Test

### When should I take this test?

Give yourself at least 4 weeks of serious study before registering for the test. There is a waiting period before you can retake the test. Keep this in mind while planning when to take your test. The waiting period can be as long as 28 days. Please check the ETS website for the current waiting period.

### Where can I take the test?

You may take Praxis tests either at home with ProctorU or at a testing center; check sites for updated access and cost information. If you go to a testing center, then follow the [ETS Testing Center Guidelines](#). Please **test your system BEFORE exam day** – follow [ETS At Home Testing Guidance](#).

### What COVID (or other disease) protocols should I be aware of?

Please check with your local testing center before test day. You may need to bring proof of vaccination or your own mask to wear throughout the experience. Follow the [ETS testing center guidelines](#).

- If you are taking the Praxis at home, there may still be specific criteria to follow.

### Are there additional study guides?

Each Math Praxis or state content test has a study guide or study companion provided by the publisher or state at no cost.

### Can I use any calculator?

You will be allowed an appropriate on-screen calculator for the Middle School Mathematics (5164) Praxis test and for the Mathematics (5165) Praxis test. You may not bring your own device. Please refer to the [ETS Calculator Use Policy](#).

You may practice with an approved on-screen calculator by using this [ETS online tutorial](#). Texas Instruments provides a 90 day free trial of their on-screen calculator [here](#).

Please follow the calculator use guidance or tutorials provided by your state or the exam vendor for state content tests.

### Can I use formula sheets?

Formula sheets vary by test. Be sure to familiarize yourself for your relevant test.

- **Go to pages 20-21** of the [ETS Study Companion for the Middle School Mathematics \(5164\)](#) Praxis test to see the unit conversions and formulas provided.

- **Go to pages 26-28** of the [ETS Study Companion for the Mathematics \(5165\)](#) Praxis test to see the notations and formulas provided.

Please follow the guidance regarding formula sheets provided by your state or exam vendor for state content tests.

### **May I use anything else to help me?**

You may use scratch paper at a testing center or a whiteboard at home. Scratch paper is not permitted for home testing. Be prepared to show both sides of the whiteboard to the proctor to show it is clean; if the whiteboard is bolted to the wall, you will need to show that it cannot be removed. You may use only those materials provided to you or approved by the proctor, such as pencils or whiteboard pens and erasers. Otherwise, your work area must be completely clean.

### **What question formats are on the exam? Multiple choice, short answer, essay, etc.?**

The Middle School Mathematics (5164) Praxis test has selected response, drag-and-drop, and numeric entry test items.

- Selected response refers to questions with multiple choice answer options. Most questions will be a standard format where you select one answer from four options. Some test items will have multiple correct answers.
- Drag-and-drop requires you to click on an answer and move it to a different part of the screen.
- Numeric entry allows you to type your response into a designated answer box.

The Mathematics (5165) Praxis test has selected response, numeric entry, drag-and-drop, text completion, and innovative question items.

- Selected response refers to questions with multiple choice answer options. Most questions will be a standard format where you select one answer from four options. Some test items will have multiple correct answers.
- Numeric entry allows you to type your response into a designated answer box.
- Drag-and-drop requires you to click on an answer and move it to a different part of the screen.
- Text completion and innovative question provide boxes in which you may type longer replies.

Here is an [ETS video on answering questions](#). Please follow the guidance regarding question formats provided by your state or exam vendor for state content tests.

### **Is there partial credit for answers that have multiple correct answers?**

Some exam questions may involve multiple choice items where you select more than one answer option; all responses must be correct, or the entire test item will be marked wrong. There is no partial credit.

### **Where can I get information about accommodations?**

If you need accommodation for medical or language concerns, please refer to the test site for further guidance. Testing center locations or dates may be limited. See the [ETS Disabilities page](#) and the [ETS Bulletin Supplement for Test Takers with Disabilities or Health-Related Needs](#).

If your primary language is not English (PLNE), then go to the **bottom of page 12** of the [ETS Praxis Tests Information Bulletin](#) for guidance how to request extended testing time.

Praxis tests require a lot of documentation for an accommodation request. ETS may take weeks to review those documents and not every request for accommodation is granted.

### **Is there a waiting period in between attempts?**

There is usually a mandatory waiting period between attempts at the *Praxis* or state content tests; check individual sites for more specific information.



## Discipline Specific Content: *Middle School Mathematics Praxis (5164)*

### Get organized: What do you know and need to know?

The [ETS Study Companion for Middle School Mathematics \(5164\)](#) Praxis includes very helpful information about the test and preparation. We recommend reviewing these topics and identifying areas requiring further study.

- Page 3 describes the overall test, such as number of questions and time allowed.
- Page 5 reviews the calculator use policy.
- Pages 6-17 provide a detailed breakdown of content with each topic, which include:
  - Numbers and Operations (23%)
  - Algebra (23%)
  - Functions (17%)
  - Geometry and Measurement (20%)
  - Statistics and Probability (17%)

### Practice with approved tools: How confident are you with the on-screen calculator?

Be sure to download the free trial from Texas Instruments or practice using the on-screen calculator. You can use the [on-screen TI-84](#) for 90 days. You may practice with an approved on-screen calculator by using this [ETS online tutorial](#).

### Use key resources: How can you fill key knowledge gaps?

There are substantial resources available at no cost, so paying for preparation resources is not typically necessary. Once you determine concept areas requiring review, here are some recommended resources:

Khan Academy:

- [Algebra 1](#)
- [Algebra 2](#)
- [Geometry](#)
- [Probability & Statistics](#)

Videos:

- [Mometrix test item walk-through](#) (this video is free; but other Mometrix content might not be)

### Work through practice questions: Did you master the concepts?

Content knowledge is not enough! You need to practice solving sample test items and solving under timed conditions, as well as under testing limitations (ex. Using an approved calculator tool, white board, etc.). Consider your test-taking strategy while you work through sample questions from reliable sources.

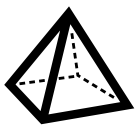
- Start with the [ETS Study Companion for Middle School Mathematics \(5164\)](#) Praxis - **take the sample test on pages 18-37.**
- Do not pay for full-length sample tests unless necessary. ETS is currently sending access to a full-length sample test at no additional cost when you register for the Praxis – that practice is subject to change and may end with no notice.

If appropriate, check your state content test site for a free sample test.

For additional study materials from ETS, please see the [Middle School Mathematics \(5164\)](#) Praxis page

### Practice Tests

You can access additional practice tests, such as from Exam Edge, in your course of study. Confer with your instructor if you need assistance with these. We recommend taking these practice tests under test conditions to simulate an exam experience.



## Discipline Specific Content: *Mathematics Praxis (5165)*

### Get organized: What do you know and need to know?

The [Study Companion for the Mathematics \(5165\)](#) Praxis includes very helpful information about the test and preparation. We recommend reviewing these topics and identifying areas requiring further study.

- Page 3 describes the overall test, such as number of questions and time allowed.
- Page 5 reviews the calculator use policy.
- Pages 6-25 provide a detailed breakdown of content with each topic, which include:
  - Number and Quantity (10%)
  - Algebra (20%)
  - Functions (20%)
  - Calculus (10%)
  - Geometry (20%)
  - Probability and Statistics (20%)

### Practice with approved tools: How confident are you with the on-screen calculator?

Be sure to download the free trial from Texas Instruments or practice using the on-screen calculator. You can use the [on-screen TI-84](#) for 90 days. You may practice with an approved on-screen calculator by using this [ETS online tutorial](#).

### Use key resources: How can you fill key knowledge gaps?

Once you determine concept areas requiring review, here are some recommended resources:

Khan Academy:

- [Algebra 1](#)
- [Algebra 2](#)
- [Geometry](#)
- [Probability & Statistics](#)
- [Pre-Calculus](#)
- [Calculus](#)

Videos:

- YouTube: [Patrick JMT](#)

Textbooks:

- Select what you need from [OpenStax Math](#).

### Work through practice questions: Did you master the concepts?

Content knowledge is not enough! You need to practice solving sample test items and solving under timed conditions, as well as under testing limitations (ex. Using an approved calculator tool, white board, etc.). Consider your test-taking strategy while you work through sample questions from reliable sources.

- Start with the [ETS Study Companion for Mathematics \(5165\)](#) Praxis - **take the sample test on pages 26-43**.
- Do not pay for full-length sample tests unless necessary. ETS is currently sending access to a full-length sample test at no additional cost when you register for the Praxis – that practice is subject to change and may end with no notice.

If appropriate, check your state content test site for a free sample test.

For additional study materials from ETS, please see the [Mathematics \(5165\)](#) Praxis page