| **Advisory Board on Teacher Education**  **and Licensure** | **Seal of the Commonwealth of Virginia** |
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**AGENDA ITEM: 2**

**DATE: October 27, 2020**

**TOPIC: Recommendation for a Passing Score for the Praxis® Mathematics (5165) Test for the Mathematics Endorsement**

# **Statutory and Regulatory Authority**:

The *Code of Virginia* provides the authority for the Board of Education to promulgate *Licensure Regulations for School Personnel*.

Section[**22.1-298.1**](https://law.lis.virginia.gov/vacode/title22.1/chapter15/section22.1-298.1/) of the *Code of Virginia*, states in part, the following:

§ [**22.1-298.1**](https://law.lis.virginia.gov/vacode/title22.1/chapter15/section22.1-298.1/) **Regulations governing licensure.**

*C. The Board of Education's regulations shall include requirements that a person seeking initial licensure:*

*1. Demonstrate proficiency in the relevant content area, communication, literacy, and other core skills for educators by achieving a qualifying score on professional assessments or meeting alternative evaluation standards as prescribed by the Board;*

*2. Complete study in attention deficit disorder;*

*3. Complete study in gifted education, including the use of multiple criteria to identify gifted students; and*

*4. Complete study in methods of improving communication between schools and families and ways of increasing family involvement in student learning at home and at school.*

*Code of Virginia,* Section [22.1-16. Bylaws and regulations generally.](https://law.lis.virginia.gov/vacode/title22.1/chapter2/section22.1-16/)

*Code of Virginia,* Section [22.1-299. License required of teachers.](https://law.lis.virginia.gov/vacode/title22.1/chapter15/section22.1-299/)

*Code of Virginia,* Section [22.1-305.2. Advisory Board on Teacher Education and Licensure.](https://law.lis.virginia.gov/vacode/title22.1/chapter15/section22.1-305.2/)

The [*Licensure Regulations for School Personnel*](https://law.lis.virginia.gov/admincode/title8/agency20/chapter23/) state, in part, the following:

## [8VAC20-22-40](https://law.lis.virginia.gov/admincode/title8/agency20/chapter23/section40/). Conditions for Licensure.

*… B. All candidates who hold at least a baccalaureate degree from a regionally accredited college or university and who seek an initial Virginia teaching license shall obtain passing scores on professional teacher's assessments prescribed by the Virginia Board of Education. With the exception of the career switcher program that requires assessments as prerequisites, individuals shall complete the professional teacher's assessment requirements within the three-year validity of the initial provisional license….*

## [8VAC20-22-70](https://law.lis.virginia.gov/admincode/title8/agency20/chapter23/section70/). Additional Endorsements.

1. *An individual who holds a teaching license may add an additional teaching endorsement to the license by passing a rigorous academic subject test for endorsements in which a test is prescribed by the Virginia Board of Education. This testing option does not apply to individuals (i) who are seeking an early/primary education preK-3 or elementary education preK-6 endorsement, special education endorsements, or a reading specialist endorsement or (ii) who hold a Technical Professional License, Vocational Evaluator License, Pupil Personnel Services License, School Manager License, or Division Superintendent License.*

**Background:**

Currently, the Board of Education requires the following assessments for initial licensure:

• Virginia Communication and Literacy Assessment (VCLA);

• Praxis Subject Assessments; and

• Reading for Virginia Educators (RVE) for specified endorsements.

The Board prescribes the Praxis Subject Assessments as a professional teacher’s assessment requirement for initial licensure in Virginia. The current Board of Education’s prescribed assessment for mathematics is the Praxis® Mathematics: Content Knowledge (5161).

The Praxis® Mathematics (5165) test will replace the Praxis® Mathematics: Content Knowledge (5161) test. This new assessment is designed and developed through work with practicing teachers and teacher educators to reflect the mathematics curriculum as well as state and national standards for mathematics, including the National Governors Association Center for Best Practices and the Council of Chief State School Officers *Common Core State Standards for Mathematics* (2010), the National Council of Teachers of Mathematics (NCTM) and the Council of the Accreditation of Educator Preparation (CAE ) *NCTM CAEP Standards* (2012), and the NCTM *Principles and Standards for School Mathematics* (2000).

In January 2021, a multistate standard-setting study was designed and conducted by the Educational Testing Service (ETS) to support the decision-making process of education agencies establishing a passing score (cut score) for the Praxis® Mathematics (5165) test. Panelists from 13 states and Washington, D.C., participated on the panel. The education agencies recommended panelists with (a) experience as either secondary mathematics teachers or college faculty who prepare secondary mathematics teachers and (b) familiarity with the knowledge and skills required of beginning secondary mathematics teachers.

Virginia did not participate in the multi-state standard study. Instead, ETS facilitated a panel discussion with five Virginia educators that mirrored the multi-state standard study in April 2021. The Virginia report reflects the panel agreed with the recommended cut score of the multi-state study.

A detailed summary of the study, Multistate Standard-Setting Technical Report -- PRAXIS® MATHEMATICS (5165) is attached, as well as the Virginia report. The technical report contains three sections. The first section describes the content and format of the test. The second section describes the standard-setting processes and methods. The third section presents the results of the standard-setting study.

The [Praxis® Mathematics Study Companion](https://www.ets.org/s/praxis/pdf/5165.pdf) document describes the purpose and structure of the test. In brief, the test measures knowledge and competencies that are important for safe and effective beginning practice as a secondary mathematics teacher. The three-hour assessment contains 66 selected-response items covering four content areas: *Number & Quantity and* *Algebra* (approximately 20 items), *Functions and Calculus* (approximately 20 items), *Geometry* (approximately 13 items), and *Statistics & Probability* (approximately 13 items). The reporting scale for the Praxis Mathematics test ranges from 100 to 200 scale-score points.

### Multistate Standard-Setting Study

The Multistate standard-setting study for the Praxis® Mathematics (5165) test is detailed in the attached report.

The following table presents the estimated conditional standard error of measurement (CSEM) around the recommended passing score. A standard error represents the uncertainty associated with a test score. The scale scores associated with one and two CSEM above and below the recommended passing score are provided. The conditional standard error of measurement provided is an estimate.

**Conditional Standard Error of Measurement Summaries**

**PRAXIS® MATHEMATICS (5165)**

|  | Raw Score | Scale Score Equivalent |
| --- | --- | --- |
| Recommended passing score (CSEM) | 39 (3.73) | 159 |
| - 2 CSEM | 32 | 143 |
| - 1 CSEM | 36 | 154 |
| +1 CSEM | 43 | 168 |
| +2 CSEM | 47 | 177 |

ETS provides a recommended passing score from the multistate standard-setting study to help

education agencies determine an appropriate operational passing score. For the Praxis Mathematics test, the recommended passing score is 39 out of a possible 60 raw-score points. The scale score associated with a raw score of 39 is 159 on a 100–200 scale.

Information regarding the multistate standard-setting process will be presented to the Advisory Board members by Malik K. McKinley, Sr.,Director of Client Relations, Professional Educator Programs, Office for Teacher Licensure and Certification, Student and Teacher Assessment Division, Educational Testing Service.

## **Action**:

The Advisory Board on Teacher Education and Licensure is to receive the presentation by

Mr. McKinley on the multistate standard setting and recommend to the Board of Education a passing score for the Praxis® Mathematics (5165) test.