| **Virginia Board of Education Agenda Item** | **Seal of the Commonwealth of Virginia** |
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# Agenda Item: G

## Date: March 21, 2019

### Title: First Review of Recommended Cut Scores for the Grades 3-8 Standards of Learning Mathematics Tests Based on the 2016 Mathematics Standards

#### Presenter: Mrs. Shelley Loving-Ryder, Assistant Superintendent for Student Assessment and ESEA Programs

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## Purpose of Presentation:

Action required by state or federal law or regulation.

## Executive Summary:

In 2018-2019 new Standards of Learning (SOL) tests measuring the 2016 mathematics content standards will be administered. Because of the changes in the content measured by these tests, the Virginia Board of Education must adopt new “cut” scores. Consistent with the process used in 1998 and in 2011-2012, committees of educators were convened in February 2019 to recommend to the Board of Education (BOE) minimum cut scores for the achievement levels of *fail/basic*, *pass/proficient,* and *pass/advanced* for the grades 3-8 SOL mathematics tests.

## Action Requested:

Other. Specify below:

The Board is asked to waive first review and adopt the cut scores for the grades 3-8 SOL mathematics based on the 2016 mathematics SOL at the March 21, 2019 meeting.

## Superintendent’s Recommendation:

The Superintendent of Public Instruction recommends that the Board of Education adopt scaled scores of at least 400 for *pass/proficient* and at least 500 for *pass/advanced* for the grades 3-8 SOL mathematics tests based on the 2016 Mathematics SOL. These scaled scores shall be equivalent to the following number of items correct on the test forms reviewed by the educator committees convened for standard setting:

* Grade 3 mathematics: 23 for *pass/proficient* and 36 for *pass/advanced*
* Grade 4 mathematics: 27 for *pass/proficient* and 45 for *pass/advanced*
* Grade 5 mathematics: 26 for *pass/proficient* and 44 for *pass/advanced*
* Grade 6 mathematics: 26 for *pass/proficient* and 45 for *pass/advanced*
* Grade 7 mathematics: 26 for *pass/proficient* and 44 for *pass/advanced*
* Grade 8 mathematics: 27 for *pass/proficient* and 45 for *pass/advanced*

Because the minimum scaled score for the *fail/basic* achievement level will be specific to each test, the Superintendent of Public Instruction recommends that the Board adopt cut scores based on the following number of items correct on the test forms reviewed by the educator committees convened for standard setting. Scaled scores that represent the same level of achievement will be determined once the Board adopts the cuts scores for each test.

* Grade 3 mathematics: 10 items correct
* Grade 4 mathematics: 13 items correct
* Grade 5 mathematics: 11 items correct
* Grade 6 mathematics: 12 items correct
* Grade 7 mathematics: 12 items correct
* Grade 8 mathematics: 12 items correct

## Rationale for Action:

Approving cut scores for the grades 3-8 SOL mathematics tests at this meeting will allow their application totests administered in the spring 2019 test administration.

## **Background Information and Statutory Authority:**

In 2018-2019 new SOL tests measuring the 2016 mathematics content standards will be administered. Because of the changes in the content measured by these tests, “cut” scores must be adopted by the Virginia Board of Education. Consistent with the process used in 1998 and in 2011- 2012, committees of educators were convened in February 2019 to recommend to the Board of Education (BOE) minimum cut scores for the achievement levels of *fail/basic*, *pass/proficient,* and *pass/advanced* for the grades 3-8 SOL mathematics tests. Information about the range of cut scores recommended by the committees for the achievement levels of *fail/ basic*, *pass/proficient,* and *pass/advanced* for the grades 3-8 SOL mathematics tests is contained in Attachment A.

## Previous Review or Action:

No previous review or action.

## **Timetable for Further Review/Action:**

Upon approval by the Board of Education, the adopted cut score will be provided to the testing contractor so that they can be applied to the grades 3-8 mathematics tests administered in spring 2019.

## Impact on Fiscal and Human Resources:

Costs associated with the implementation of new cut scores for the grades 3-8 SOL mathematics tests will be covered by existing funds.

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# Attachment A

**Summary and Background Information on Proposed Cut Scores   
for the Mathematics Tests for Grades 3-8 Based on the 2016 Standards of Learning**

| **Test**  **Name** | **Pass/Proficient** | | | | | **Pass/Advanced** | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Background**  **Information** | | **Standard Setting  Summary** | | | **Background**  **Information** | | **Standard Setting  Summary** | | |
| Pass/Proficient Cut Score for Previous Mathematics Test\* | Pass/Proficient Cut Score for  New Test  to Maintain Previous Level of Rigor | Round 3 Median for Proficient\* | Articulation Committee  Rec. | Supt.’s Rec. | Pass/Advanced  Cut Score for Previous Mathematics Test\* | Pass/Advanced Cut Score for New Test  to Maintain Previous Level  of Rigor | Round 3 Median for Advanced | Articulation Committee  Rec. | Supt.’s Rec. |
| Grade 3 | 26 out of 40 | 26 out of 40 | 20 out of 40 | 20 out of 40 | 23 out of 40 | 36 out of 40 | 36 out of 40 | 35 out of 40 | 36 out of 40 | 36 out of 40 |
| Grade 4 | 31 out of 50 | 29 out of 50 | 20 out of 50 | 25 out of 50 | 27 out of 50 | 45 out of 50 | 44 out of 50 | 45 out of50 | 45 out of 50 | 45 out of 50 |
| Grade 5 | 31 out of 50 | 28 out of 50 | 21 out of 50 | 25 out of 50 | 26 out of 50 | 45 out of 50 | 43 out of 50 | 44 out of 50 | 44 out of 50 | 44 out of 50 |
| Grade 6 | 28 out of 50 | 26 out of 50 | 28 out of 50 | 26 out of 50 | 26 out of 50 | 45 out of 50 | 45 out of 50 | 45 out of 50 | 45 out of 50 | 45 out of 50 |
| Grade 7 | 31 out of 50 | 29 out of 50 | 24 out of 50 | 25 out of 50 | 26 out of 50 | 45 out of 50 | 45 out of 50 | 42 out of 50 | 44 out of 50 | 44 out of 50 |
| Grade 8 | 31 out of 50 | 28 out of 50 | 30 out of 50 | 26 out of 50 | 27 out of 50 | 46 out of 50 | 46 out of 50 | 46 out of 50 | 45 out of 50 | 45 out of 50 |

**Summary and Background Information on Proposed Cut Scores   
for the Mathematics Tests for Grades 3-8 Based on the 2016 Standards of Learning**

| **Test**  **Name** | **Fail/Basic** | | | | |
| --- | --- | --- | --- | --- | --- |
| **Background**  **Information** | | **Standard Setting  Summary** | | |
| Fail/Basic Cut Score for Previous Mathematics Test\* | Fail/Basic Cut Score for New Test to Maintain Previous Level  of Rigor | Round 3 Median for Fail/Basic | Articulation Committee  Recommendation | Superintendent’s Recommendation |
| Grade 3 | 16 out of 40 | 15 out of 40 | 6 out of 40 | 10 out of 40 | 10 out of 40 |
| Grade 4 | 17 out of 50 | 16 out of 50 | 4 out of 50 | 13 out of 50 | 13 out of 50 |
| Grade 5 | 18 out of 50 | 17 out of 50 | 6 out of 50 | 11 out of 50 | 11 out of 50 |
| Grade 6 | 16 out of 50 | 14 out of 50 | 10 out of 50 | 12 out of 50 | 12 out of 50 |
| Grade 7 | 17 out of 50 | 16 out of 50 | 6 out of 50 | 12 out of 50 | 12 out of 50 |
| Grade 8 | 17 out of 50 | 15 out of 50 | 10 out of 50 | 12 out of 50 | 12 out of 50 |

**\*** Test based on the 2009 Mathematics Standards of Learning