



Grade 3 Mathematics Item Map: A Resource to Understanding Student Scores

Virginia students participate in grades 3-8 Virginia Growth Assessments and Standards of Learning tests in reading and mathematics. This item map is a resource that provides descriptions and examples of items students were likely to answer correctly based on the vertical scaled score they achieved on their test. A vertical scaled score is a score that allows comparisons between Virginia Growth Assessments and Standards of Learning tests.

The item map shown in the tables below provides examples of test question descriptions at different score points from 900-1770, the vertical scaled score range for Grade 3 Mathematics. These examples represent what students may see on the state assessments in Grade 3 Mathematics.

The descriptions are examples of what students may know or be able to do at each score point. Some descriptions include a released test question and answer options to further show what the student would *most likely answer correctly* if they achieved at or above that score point. This information, along with a student's test results, may be used to plan conversations with families, determine intervention strategies to strengthen student understanding, or establish a plan to accelerate learning.

Match the student's score to the closest number in the left column. In the right column is a description of an item the student would *most likely answer correctly*, based on their score. The student would also most likely correctly answer questions at all score points below the score they achieved.

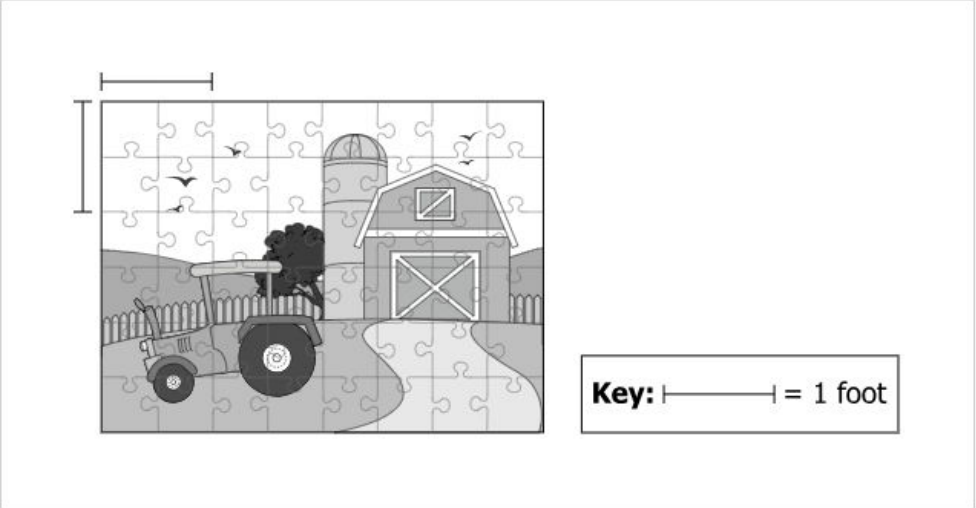
Students who scored in the range 1478 – 1770 are well prepared for learning new grade-level content.

Score	Description of Test Item
1615	Create an equation to represent the relationship between equivalent expressions. (Probability, Statistics, Patterns, Functions, and Algebra)

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1535	<p>Solve a multistep contextual problem involving addition and/or subtraction of whole numbers. (Computation and Estimation)</p> <div data-bbox="358 409 1435 1005" style="border: 1px solid black; padding: 10px;"><p>A school sold tickets for a play on Friday and Saturday.</p><ul style="list-style-type: none">• The school sold 4,451 tickets on Friday.• The school sold 164 fewer tickets on Saturday than it sold on Friday.<p>What is the total number of tickets sold for the play on Friday and Saturday?</p><p><input type="radio"/> A. 4,287</p><p><input type="radio"/> B. 4,615</p><p><input type="radio"/> C. 8,738</p><p><input type="radio"/> D. 8,902</p></div>
1528	<p>Determine the value of a digit in a whole number with a model. (Number and Number Sense)</p>

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<p>1492</p>	<p>Estimate and determine the perimeter of a given figure. (Measurement and Geometry)</p>
<p>A picture of Samantha's giant floor puzzle is shown.</p>  <p>Which measurement is closest to the perimeter of Samantha's giant floor puzzle?</p> <p> <input type="radio"/> A. 7 feet <input type="radio"/> B. 12 feet <input type="radio"/> C. 14 feet <input type="radio"/> D. 16 feet </p>	
<p>1489</p>	<p>Solve a multistep contextual problem involving addition and/or subtraction of whole numbers. (Computation and Estimation)</p>

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Students who scored in the range 1367 – 1477 are at risk for needing additional support with learning grade-level content.

Score	Description of Test Item
1473	Identify equality in an equation. (Probability, Statistics, Patterns, Functions, and Algebra)
1465	<p>Solve a contextual problem to make change from \$5.00 or less. (Measurement and Geometry)</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>Directions: Drag each piece of money to the empty box. A piece of money may be used more than one time.</p> <p>Ursula bought a book for \$4.38, including tax. She paid for the book using a \$5 bill. Exactly how much change should Ursula receive?</p> <p style="text-align: center;">Ursula's Change</p> <div style="border: 1px solid blue; height: 180px; width: 100%; margin: 10px 0;"></div> <div style="display: flex; justify-content: center; gap: 10px; margin-top: 10px;">       </div> </div>
1455	Interpret the place and value of each digit of a whole number. (Number and Number Sense)

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1432 Solve a multistep contextual problem involving addition and/or subtraction of whole numbers. (Computation and Estimation)

The Acers played in two different basketball games. In game 1, the Acers scored 12 fewer points than the Tigers.

Game 1

Team	Score
Acers	?
Tigers	106

In game 2, the Acers scored 14 more points than the Rockets.

Game 2

Team	Score
Rockets	83
Acers	?

What is the total number of points scored by the Acers in games 1 and 2 combined?

A. 163 B. 189
 C. 191 D. 215

1384 Use a number line to represent a division fact. (Computation and Estimation)



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Students who scored in the range 900 – 1366 need additional support with prior knowledge and foundational skills while learning grade-level content.

Score	Description of Test Item
1332	<p>Compare whole numbers, each 9,999 or less. (Number and Number Sense)</p> <div style="border: 1px solid black; padding: 10px;"><p>Directions: Drag the answers to the correct boxes.</p><p>Select the number that will make each statement true.</p><div style="display: flex; justify-content: space-around; align-items: flex-start;"><div style="border: 1px solid black; padding: 5px;"><input style="width: 60px; height: 25px; margin-right: 5px;" type="text"/> $<$ 3,212</div><div style="border: 1px solid black; padding: 5px;">3,485 $=$ <input style="width: 60px; height: 25px; margin-left: 5px;" type="text"/></div><div style="border: 1px solid black; padding: 5px;"><input style="width: 60px; height: 25px; margin-right: 5px;" type="text"/> $>$ 3,674</div></div><div style="margin-left: 20px; display: flex; flex-direction: column; align-items: center;"><div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px;">3,458</div><div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px;">3,764</div><div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px;">3,597</div><div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px;">3,189</div><div style="border: 1px solid gray; padding: 5px;">3,485</div></div></div>

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<p>1292</p>	<p>Analyze and interpret information presented in a pictograph. (Probability, Statistics, Patterns, Functions, and Algebra)</p> <p>The graph shows the number of each type of book checked out of a library by a class.</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Library Books</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Type of Book</th> <th>Number of Books</th> </tr> </thead> <tbody> <tr> <td>Fiction</td> <td></td> </tr> <tr> <td>Biography</td> <td></td> </tr> <tr> <td>Science</td> <td></td> </tr> <tr> <td>History</td> <td></td> </tr> </tbody> </table> <p>Key: = 2 books</p> </div> <p>What is the total number of books checked out by this class?</p> <p> <input type="radio"/> A. 23 <input type="radio"/> B. 20 <input type="radio"/> C. 13 <input type="radio"/> D. 10 </p>	Type of Book	Number of Books	Fiction		Biography		Science		History	
Type of Book	Number of Books										
Fiction											
Biography											
Science											
History											
<p>1290</p>	<p>Tell time to the nearest minute. (Measurement and Geometry)</p>										
<p>1245</p>	<p>Estimate liquid volume in U.S. Customary units. (Measurement and Geometry)</p>										
<p>1185</p>	<p>Recall multiplication facts. (Computation and Estimation)</p>										