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✔ Engaging Format   ✔ Varied Practice   ✔ Sound Content
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- Why you need our product(s)
- How you use them in your classroom
- What outcomes and results you are experiencing

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Sincerely,

Your ECS Team

p.s. It’s easy to share your story! Visit our Re:Think blog at ecslearningsystems.com/blog and click the Re:Tell button.

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STAAR MASTER® Quick Review, Teacher Guide—Math, Grade 6

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What’s inside STAAR MASTER® Quick Review for Math?

This STAAR MASTER® Quick Review for Math includes more than 260 grade-specific practice items that reflect the content of the STAAR®-eligible TEKS for Mathematics.

The Teacher Guide includes the following information—

- an overview of STAAR MASTER Quick Review for Math and key characteristics of the State of Texas Assessments of Academic Readiness (STAAR) for Mathematics
- an explanation of Quick Review’s organization by reporting category and standard(s)
- explanations of both rigor and complexity levels as they apply to Quick Review
- an explanation of Webb’s “depth-of-knowledge” model as it relates to complexity levels used in Quick Review
- suggestions for using Quick Review in the classroom, at home, in tutorials/remedial classes/summer school, and in SSI classes
- correlation charts indicating the specific standard(s) addressed in each practice item
- a complete answer key

The STAAR MASTER Quick Review for Math, Grade 6, provides practice and review material for the mathematics portion of the STAAR. In particular, the book includes the following information—

- more than 260 practice items focusing on the grade-specific content of the STAAR-eligible TEKS for Mathematics
- practice items reflecting the kind of problems students might encounter on the actual STAAR
- a real-world context for practice items whenever possible, covering a broad range of topics and ideas of interest to students
- “skills tags” (labels) to identify the TEKS standard(s) addressed in each practice item
- multiple practice items to address each standard/expectation, providing repeated practice in a variety of contexts
- selected practice items with “gridable responses,” reflecting the format used on the actual STAAR
- mathematics reference chart

Mathematical Process Standards: The Mathematical Process Standards are not tested in isolation, nor do they appear in a separate reporting category. Rather, these standards are incorporated into practice items based on content standards from the four reporting categories. Practice items require students to demonstrate understanding of these important mathematical processes within the context of each problem.

Skills Tags: Each practice item includes a “skills tag” (Figure 1) for easy identification of the TEKS-based standard addressed in that item.

![Figure 1](image-url)
Descriptions of STAAR MASTER® Complexity Levels

The following descriptions provide an overview of the three complexity levels used to align the STAAR MASTER® Quick Review items to the STAAR®-eligible TEKS. Each explanation details the kinds of activities that occur within each level. However, they do not represent all of the possible thought processes for each level.

Low Complexity (L)

Low-complexity items align with the TEKS at Level 1 of the Webb (2002a) model. Items of low complexity involve recall and reproduction. Activities and problems at this level require routine, single-step methods. An item may ask students to recognize or restate a fact, definition, or term. For example, students may need to identify attributes of a geometric figure. Items of this complexity may require students to follow a basic procedure with clearly defined steps. At this cognitive level, students may need to apply a formula or perform a simple algorithm. Some major concepts represented at this level include arithmetic facts, perimeter, and converting units of measure. A low-complexity item may ask students to identify, recognize, use, or measure information and concepts.

Moderate Complexity (M)

Moderate-complexity items align with the TEKS at Level 2 of the Webb model. Items of moderate complexity involve both comprehension and the subsequent processing of information. Activities at this level demand more than one step in the reasoning process. Students are asked to determine how to best solve the problem. An item may ask students to generate a table of paired numbers based on a real-life situation. Items may involve using a model to solve a problem. At this cognitive level, students will need to visualize for tasks such as extending patterns and determining nonexamples. Items may involve interpreting information from a simple graph, table, or diagram. Some major concepts represented at this level include classifying geometric figures, determining probability, and using strategies to estimate. Items of this complexity may ask students to classify, organize, observe, collect, display, or compare data.

Some items also require students to apply low-complexity skills and concepts.

Moderate Complexity

High Complexity (H)

High-complexity items align with the TEKS at Level 3 and/or Level 4 of the Webb model*. Items of high complexity require students to use strategic, multi-step thinking, develop a deeper understanding of the information and extend thinking. The problems at this level are non-routine and more abstract. Students are asked to demonstrate more flexible thinking, apply prior knowledge, make and test conjectures, and support their responses. High-complexity items may require students to make generalizations from patterns. Items may involve interpreting information from a complex graph, table, or diagram. At this cognitive level, students will need to justify the reasonableness of a solution process when more than one solution exists. Students will use concepts to solve and explain problems, such as how changes in dimensions affect the volume of a figure. A high-complexity item may ask students to plan, reason, explain, compare, differentiate, draw conclusions, cite evidence, analyze, synthesize, apply, or prove. Some items also require students to apply low- and/or moderate-complexity skills and concepts.

High Complexity

*Note: Although state standards may include expectations that require extended thinking, many large-scale assessment activities are not classified as Level 4. Performance and open-ended assessments may require activities at Level 4.
Organization of Quick Review for Math

The STAAR MASTER® Quick Review for Math uses a practical, user-friendly layout designed to streamline its use in a classroom, home, tutorial, or other setting.

<table>
<thead>
<tr>
<th>Reporting Category</th>
<th>Each Quick Review for Math is organized into four reporting categories. These reporting categories are dictated by the STAAR®-eligible TEKS for each grade.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week</td>
<td>Each reporting category is divided into three weeks. (However, the length of time required to complete items is best decided by the teacher.)</td>
</tr>
<tr>
<td>Day</td>
<td>Each week is then divided into five days—one “school week.” (Again, the teacher can use items at his or her own pace.)</td>
</tr>
</tbody>
</table>

The organization of reporting categories, weeks, and days is best represented by the diagram to the right, which provides an example for Reporting Category 1.

If you refer to the correlation charts on pages 14-17 of this teacher guide, you will notice “clustering” of items, depending on the week. Within each reporting category, Week 1 generally focuses on the first half of that reporting category’s standards, while Week 2 generally focuses on the second half of that reporting category’s standards. Finally, Week 3 provides a review “across the board,” offering mixed practice for the standards in that reporting category.
### Answer Key

#### Reporting Category 1

| Week 1, Day 1 | 1. | 2. | 3. | 4. | 5. |
| Week 1, Day 2 | 1. | 2. | 3. | 4. | 5. |
| Week 1, Day 3 | 1. | 2. | 3. | 4. | 5. |
| Week 1, Day 4 | 1. | 2. | 3. | 4. | 5. |
| Week 1, Day 5 | 1. | 2. | 3. | 4. | 5. |
| Week 2, Day 1 | 1. | 2. | 3. | 4. |
| Week 2, Day 2 | 1. | 2. | 3. | 4. | 5. |
| Week 2, Day 3 | 1. | 2. | 3. | 4. | 5. |
| Week 2, Day 4 | 1. | 2. | 3. | 4. | 5. |
| Week 2, Day 5 | 1. | 2. | 3. | 4. | 5. |
| Week 3, Day 1 | 1. | 2. | 3. | 4. | 5. |
| Week 3, Day 2 | 1. | 2. | 3. | 4. | 5. |
| Week 3, Day 3 | 1. | 2. | 3. | 4. |
| Week 3, Day 4 | 1. | 2. | 3. | 4. | 5. | 6. |
| Week 3, Day 5 | 1. | 2. | 3. | 4. | 5. |

#### Reporting Category 2

| Week 1, Day 1 | 1. | 2. | 3. | 4. | 5. | 6. |
| Week 1, Day 2 | 1. | 2. | 3. | 4. | 5. |
| Week 1, Day 3 | 1. | 2. | 3. | 4. | 5. |
| Week 1, Day 4 | 1. | 2. | 3. | 4. | 5. |
| Week 1, Day 5 | 1. | 2. | 3. | 4. | 5. |
| Week 2, Day 1 | 1. | 2. | 3. | 4. | 5. |
| Week 2, Day 2 | 1. | 2. | 3. | 4. | 5. |
| Week 2, Day 3 | 1. | 2. | 3. | 4. | 5. |
| Week 2, Day 4 | 1. | 2. | 3. | 4. |
| Week 2, Day 5 | 1. | 2. | 3. | 4. | 5. | 6. |
| Week 3, Day 1 | 1. | 2. | 3. | 4. | 5. |
| Week 3, Day 2 | 1. | 2. | 3. | 4. | 5. |
| Week 3, Day 3 | 1. | 2. | 3. | 4. |
| Week 3, Day 4 | 1. | 2. | 3. | 4. | 5. | 6. |
| Week 3, Day 5 | 1. | 2. | 3. | 4. | 5. |
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6.2D (M)

3. The values of 4 musical notes are given below.

\[ \begin{align*}
&\frac{1}{8} \quad \frac{1}{2} \quad \frac{1}{16} \quad \frac{1}{4}
\end{align*} \]

Which of the following shows the notes in order from greatest to least value?

A

B

C

D

6.7A (L)

4. What prime factors are represented by \(5^3 \times 3^4\)?

A \( 5 \times 3 \times 3 \times 4 \)

B \( 5 \times 5 \times 5 \times 3 \times 3 \times 3 \)

C \( 5 \times 5 \times 5 \times 5 \times 5 \times 3 \times 3 \times 3 \)

D \( 3 \times 3 \times 3 \times 3 \times 4 \times 4 \times 4 \)

6.7B (M)

5. What is the difference between an algebraic expression and a numeric expression?

A An algebraic expression has a variable, but a numeric expression does not.

B A numeric expression has a variable, but an algebraic expression does not.

C An algebraic expression includes an equal sign, but a numeric expression does not.

D A numeric expression includes an equal sign, but an algebraic expression does not.
REPORTING CATEGORY 1, WEEK 2

6.4D (L)
1. A vehicle can travel 225 miles in 3 hours. What is the vehicle’s rate of travel in miles per hour?

Record your answer in the boxes. Then fill in the bubbles. Be sure to use the correct place value.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.4E (L)
2. In which diagram does the shaded portion represent 75%?

A

B

C

D

6.4G (L)
3. Clara spent \( \frac{1}{2} \) of her allowance on a new blouse. To find how much she spent, you could multiply her total allowance by—

A 0.5
B 0.2
C 0.12
D 0.1
6.3C (M)
1. Which equation does the number line below best represent?

A 3 ÷ n = 9
B 3 x 3 = n
C 3 + n = 9
D 3 x 9 = n

6.3E (L)
2. Levi is traveling with his mom and sister to visit his grandparents. His grandparents live 183 miles away, and the family has traveled \( \frac{1}{3} \) of the distance so far. How many more miles must they travel?

A 45.75
B 61
C 91.5
D 122

6.5B (M)
3. A bookstore manager wants to know how many fiction books and how many nonfiction books his store sold last month. The manager knows that the store sold 450 books in all last month and that 56% of those books were fiction. How many nonfiction books did the store sell last month?

Record your answer in the boxes. Then fill in the bubbles. Be sure to use the correct place value.
6.4A (M)
4. Sloan observed the growth of a bean plant in science class. She recorded the plant’s growth on the graph below.

Sloan wrote an equation to find the height of the plant (y) after a given number of weeks (x). Which equation did Sloan write?

A  x = 2.5y  
B  y = 2.5x  
C  x = y + 2.5  
D  y = x + 2.5

6.5A (M)
5. A manufacturing company produces microchips for smartphones. The table below shows the relationship between s, the number of microchips sold, and p, the total profit earned from microchip sales.

<table>
<thead>
<tr>
<th>s</th>
<th>50</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>250</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>$475</td>
<td>$950</td>
<td>$1,900</td>
<td>$2,375</td>
<td></td>
</tr>
</tbody>
</table>

To find p when s is 150, the company should multiply 150 by a scale factor of—

A  2.5  
B  5  
C  9.5  
D  15
3. A triathlete built a rectangular lap pool that measured 2.5 meters by 50 meters by 2 meters in his backyard. How many cubic meters of water are needed to fill the pool?

Record your answer in the boxes. Then fill in the bubbles. Be sure to use the correct place value.

6.11A (L)
4. Which point best represents the ordered pair (3, 2)?

A  Point  
B  Point  
C  Point  
D  Point  

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6.8B (H)
1. The area formula for a parallelogram is the same as the area formula for a rectangle.

\[ A = lw \]

Which diagram correctly shows how to decompose a parallelogram to prove that its area formula is \( A = lw \)?

- A
- B
- C
- D

6.8C (M)
2. The heights, bases, and areas of some triangles are shown in the table below. Look at the pattern of numbers.

<table>
<thead>
<tr>
<th>Height (units)</th>
<th>Base (units)</th>
<th>Area (square units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>4</td>
<td>32</td>
<td>64</td>
</tr>
<tr>
<td>6</td>
<td>( b )</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>64</td>
<td>256</td>
</tr>
</tbody>
</table>

Which expression can be used to find the area, in square units, of a triangle with a height of 6 units and a base of \( b \)?

- A \( 2(6b) \)
- B \( \frac{6b}{2} \)
- C \( \frac{2b}{6} \)
- D \( \frac{(6 + b)}{2} \)
6.12C (M)
1. The stem-and-leaf plot below shows the number of minutes it takes a company’s employees to drive to work each morning.

<table>
<thead>
<tr>
<th>Stem</th>
<th>Leaf</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>6 9</td>
</tr>
<tr>
<td>1</td>
<td>1 3 7</td>
</tr>
<tr>
<td>2</td>
<td>0 2 2 8</td>
</tr>
<tr>
<td>3</td>
<td>1 2 4 4 8 9</td>
</tr>
<tr>
<td>4</td>
<td>0 3 5 8</td>
</tr>
</tbody>
</table>

*Key: 1 | 1 = 11 minutes*

What is the range and median of the data in the stem-and-leaf plot above?

- **A** Range: 42 Median: 31
- **B** Range: 40 Median: 28
- **C** Range: 40 Median: 31
- **D** Range: 42 Median: 28

6.13A (M)
2. Look at the box plot below.

Which of the following is true?

- **A** Twenty-five percent of the data is greater than 12.
- **B** Twenty-five percent of the data is greater than 26.
- **C** Twenty-five percent of the data is greater than 36.
- **D** Twenty-five percent of the data is greater than 42.
REPORTING CATEGORY 4, WEEK 2

6.14A (M)
1. The chart below lists four banks and some of their fees.

<table>
<thead>
<tr>
<th></th>
<th>First Federal Bank</th>
<th>First State Bank</th>
<th>First City Bank</th>
<th>First Farmers’ Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Banking</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>Checking</td>
<td>$10 per month fee</td>
<td>$0.50 per check</td>
<td>Free Checking</td>
<td>$5 per month fee</td>
</tr>
<tr>
<td>Debit Card</td>
<td>$0.75 per transaction</td>
<td>No Fees</td>
<td>$1 per transaction</td>
<td>$2 per transaction</td>
</tr>
<tr>
<td>ATM Fees</td>
<td>No Fees</td>
<td>Bank ATM: $1 per transaction</td>
<td>Nonbank ATM: $2.50 per transaction</td>
<td>Bank ATM: No fees Nonbank ATM: $2 per transaction</td>
</tr>
</tbody>
</table>

Last month, Geraldine wrote 3 checks. She also completed 6 debit card transactions, 4 bank ATM withdrawals, and 1 nonbank ATM withdrawal. Based on these banking activities, which financial institution from the chart above would be least expensive for Geraldine?

A  First City Bank
B  First Farmers’ Bank
C  First Federal Bank
D  First State Bank

6.14C (L)
2. To correctly balance a check register, you—

A  add deposits and add withdrawals
B  add deposits and subtract withdrawals
C  subtract deposits and add withdrawals
D  subtract deposits and subtract withdrawals