
**CONNECTICUT MASTERY TEST
Modified Assessment System
(MAS)**

**Performance Level Descriptors for Mathematics
Grades 3-8**

**Connecticut Mastery Test
Modified Assessment System (MAS)
Mathematics Performance Level Descriptors**

Grade 3

Grade 3 Performance Level Descriptors for Mathematics

Goal Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 3 students who perform at this level are likely to demonstrate adequately- to well-developed conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are accurate and include complete explanations. Generally, for each grade-level content standard listed below, students who perform at the Goal level on the Grade 3 CMT MAS Mathematics test **competently**:

Proficient Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 3 students who perform at this level are likely to demonstrate partially developed conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are partially accurate and include some explanations. Generally, for each grade-level content standard listed below, students who perform at the Proficient level on the Grade 3 CMT MAS Mathematics test **marginally**:

Basic Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 3 students who perform at this level are likely to demonstrate limited conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are inaccurate and include minimal to no explanations. Generally, for each grade-level content standard listed below, students who perform at the Basic level on the Grade 3 CMT MAS Mathematics test **have a limited ability to**:

NUMERICAL AND PROPORTIONAL REASONING

- Use place value concepts to identify alternative forms of expressing whole numbers including expanded notation and regrouping
- Order and round whole numbers and locate points on number lines and scales
- Represent whole numbers and fractions as pictorial representations and vice versa
- Identify the appropriate operation and write a story problem to match a given number sentence
- Compute sums and differences of whole numbers
- Solve problems involving whole numbers and money amounts without extraneous information
- Identify the best expression to find an estimate

GEOMETRY AND MEASUREMENT

- Solve problems involving time
- Measure lengths and identify appropriate measurement units for a given situation
- Identify, classify, and draw 2-dimensional shapes

WORKING WITH DATA: PROBABILITY AND STATISTICS

- Read and interpret data in tables, graphs, and charts and draw graphs using a given set of data
- Solve problems involving elementary notions of probability
- Sort and classify objects by a common attribute

ALGEBRAIC REASONING: PATTERNS AND FUNCTIONS

- Extend or complete patterns involving whole numbers or attributes and identify or state rules for patterns

**Connecticut Mastery Test
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Grade 4

Grade 4 Performance Level Descriptors for Mathematics

Goal Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 4 students who perform at this level are likely to demonstrate adequately- to well-developed conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are accurate and include complete explanations. Generally, for each grade-level content standard listed below, students who perform at the Goal level on the Grade 4 CMT MAS Mathematics test **competently**:

Proficient Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 4 students who perform at this level are likely to demonstrate partially developed conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are partially accurate and include some explanations. Generally, for each grade-level content standard listed below, students who perform at the Proficient level on the Grade 4 CMT MAS Mathematics test **marginally**:

Basic Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 4 students who perform at this level are likely to demonstrate limited conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are inaccurate and include minimal to no explanations. Generally, for each grade-level content standard listed below, students who perform at the Basic level on the Grade 4 CMT MAS Mathematics test **have a limited ability to**:

NUMERICAL AND PROPORTIONAL REASONING

- Use place value concepts to identify alternative forms of expressing whole numbers including expanded notation and regrouping
- Order whole numbers, fractions, and decimals; round whole numbers; and locate points on number lines and scales
- Represent fractions and decimals as pictorial representations and vice versa
- Write a story problem to match a given number sentence
- Compute sums, differences, products, and quotients of whole numbers and money amounts
- Add and subtract common fractions with like denominators
- Solve problems involving whole numbers and money amounts without extraneous information
- Identify the best expression to find an estimate

GEOMETRY AND MEASUREMENT

- Solve problems involving time
- Measure lengths and identify appropriate measurement units for a given situation
- Identify, describe, classify, and draw 2-dimensional geometric shapes

WORKING WITH DATA: PROBABILITY AND STATISTICS

- Draw graphs using a given set of data
- Solve problems involving elementary notions of probability
- Sort, classify, and draw logical conclusions from data and solve problems involving the organization of data

ALGEBRAIC REASONING: PATTERNS AND FUNCTIONS

- Extend or complete patterns involving whole numbers or attributes and identify rules for patterns
- Solve simple 1-step equations involving addition

**Connecticut Mastery Test
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Grade 5

Grade 5 Performance Level Descriptors for Mathematics

Goal Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 5 students who perform at this level are likely to demonstrate adequately- to well-developed conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are accurate and include complete explanations. Generally, for each grade-level content standard listed below, students who perform at the Goal level on the Grade 5 CMT MAS Mathematics test **competently**:

Proficient Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 5 students who perform at this level are likely to demonstrate partially developed conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are partially accurate and include some explanations. Generally, for each grade-level content standard listed below, students who perform at the Proficient level on the Grade 5 CMT MAS Mathematics test **marginally**:

Basic Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 5 students who perform at this level are likely to demonstrate limited conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are inaccurate and include minimal to no explanations. Generally, for each grade-level content standard listed below, students who perform at the Basic level on the Grade 5 CMT MAS Mathematics test **have a limited ability to**:

NUMERICAL AND PROPORTIONAL REASONING

- Use place value concepts to identify alternative forms of expressing whole numbers including expanded notation and regrouping
- Represent fractions, mixed numbers, and decimals as pictorial representations and vice versa
- Order and round whole numbers
- Identify the appropriate operation and write a story problem to match a given number sentence
- Compute sums, differences, products, and quotients of whole numbers and money amounts
- Add and subtract common fractions with like denominators
- Solve problems involving whole numbers and money amounts without extraneous information
- Identify the best expression to find an estimate

GEOMETRY AND MEASUREMENT

- Solve problems involving time
- Measure lengths, determine perimeters, and identify appropriate measurement units for a given situation
- Identify, describe, classify, and draw 2-dimensional geometric shapes and figures
- Use spatial reasoning to solve problems involving symmetry

WORKING WITH DATA: PROBABILITY AND STATISTICS

- Read and interpret data in tables, graphs, and charts and draw graphs using a given set of data
- Identify or state a reasonable conclusion from data in tables, graphs, and charts
- Solve problems involving elementary notions of probability
- Sort, classify, and draw logical conclusions from data and solve problems involving the organization of data

ALGEBRAIC REASONING: PATTERNS AND FUNCTIONS

- Extend or complete patterns involving numbers or attributes, and identify rules for patterns
- Solve simple 1-step equations involving addition and subtraction

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Grade 6

Grade 6 Performance Level Descriptors for Mathematics

Goal Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 6 students who perform at this level are likely to demonstrate adequately- to well-developed conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are accurate and include complete explanations. Generally, for each grade-level content standard listed below, students who perform at the Goal level on the Grade 6 CMT MAS Mathematics test **competently**:

Proficient Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 6 students who perform at this level are likely to demonstrate partially developed conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are partially accurate and include some explanations. Generally, for each grade-level content standard listed below, students who perform at the Proficient level on the Grade 6 CMT MAS Mathematics test **marginally**:

Basic Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 6 students who perform at this level are likely to demonstrate limited conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are inaccurate and include minimal to no explanations. Generally, for each grade-level content standard listed below, students who perform at the Basic level on the Grade 6 CMT MAS Mathematics test **have a limited ability to**:

NUMERICAL AND PROPORTIONAL REASONING

- Use place value concepts to identify alternative forms of representing numbers using expanded notation and regrouping
- Represent fractions, mixed numbers, and decimals using various equivalent forms including numerical and pictorial representations
- Order and round whole numbers, fractions, mixed numbers, and decimals and locate points on number lines and scales
- Identify the appropriate operation and write a story problem to match a given equation
- Compute sums, differences, products, and quotients of whole numbers and decimals
- Add and subtract fractions/mixed numbers and multiply common fractions
- Solve problems involving whole numbers, decimals, and money amounts without extraneous information
- Identify the best expression to find an estimate and identify whether and why a particular strategy will result in an over/under estimate.
- Solve problems involving ratios

GEOMETRY AND MEASUREMENT

- Determine perimeter, identify appropriate measurement units for a given situation, and solve problems involving conversions of customary or metric units of measure
- Identify, describe, classify, and draw two dimensional geometric shapes and figures
- Use spatial reasoning to solve problems involving symmetry

WORKING WITH DATA: PROBABILITY AND STATISTICS

- Read and interpret data in tables, graphs, and charts and draw graphs using a given set of data
- Identify a reasonable conclusion from data in tables, graphs, and charts and solve problems involving measures of central tendency
- Solve problems involving elementary notions of probability
- Sort, classify, and draw logical conclusions from data and solve problems involving the organization of data

ALGEBRAIC REASONING: PATTERNS AND FUNCTIONS

- Extend or complete patterns involving numbers or attributes and identify rules for patterns
- Solve simple 1-step equations involving addition, subtraction, and multiplication

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Grade 7

Grade 7 Performance Level Descriptors for Mathematics

Goal Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 7 students who perform at this level are likely to demonstrate adequately- to well-developed conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are accurate and include complete explanations. Generally, for each grade-level content standard listed below, students who perform at the Goal level on the Grade 7 CMT MAS Mathematics test **competently**:

Proficient Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 7 students who perform at this level are likely to demonstrate partially developed conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are partially accurate and include some explanations. Generally, for each grade-level content standard listed below, students who perform at the Proficient level on the Grade 7 CMT MAS Mathematics test **marginally**:

Basic Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 7 students who perform at this level are likely to demonstrate limited conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are inaccurate and include minimal to no explanations. Generally, for each grade-level content standard listed below, students who perform at the Basic level on the Grade 7 CMT MAS Mathematics test **have a limited ability to**:

NUMERICAL AND PROPORTIONAL REASONING

- Use place value concepts to identify alternative forms of representing numbers using expanded form
- Represent fractions, mixed numbers, decimals, and percents using various equivalent forms including numerical and pictorial representations
- Order and round whole numbers, fractions, mixed numbers, decimals, and locate integers on number lines and scales
- Identify the appropriate operation and write a story problem to match a given equation
- Compute sums, differences, products, quotients of whole numbers and decimals
- Add, subtract, multiply fractions/mixed numbers and add integers
- Solve problems involving whole numbers and decimals without extraneous information
- Identify the best expression to find an estimate and identify whether and why a particular strategy will result in an over/under estimate.
- Compute with percents and solve problems involving ratios and proportions

GEOMETRY AND MEASUREMENT

- Determine perimeter/area/volume; identify appropriate measurement units for a given situation; and solve problems involving conversions of customary or metric units of measure
- Identify, describe, classify, and draw geometric shapes and figures
- Use spatial reasoning to solve problems involving congruence, similarity, and relate 2- and 3-dimensional representations of objects

WORKING WITH DATA: PROBABILITY AND STATISTICS

- Read and interpret data in tables, graphs, and charts and draw graphs using a given set of data
- Identify or state a reasonable conclusion from data in tables, graphs, and charts and solve problems involving measures of central tendency
- Solve problems involving elementary notions of probability
- Sort, classify, and draw logical conclusions from data and solve problems involving the organization of data

ALGEBRAIC REASONING: PATTERNS AND FUNCTIONS

- Extend or complete patterns involving numbers or attributes and identify or state rules for patterns
- Evaluate algebraic and numerical expressions and solve equations

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Grade 8

Grade 8 Performance Level Descriptors for Mathematics

Goal Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 8 students who perform at this level are likely to demonstrate adequately- to well-developed conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are accurate and include complete explanations. Generally, for each grade-level content standard listed below, students who perform at the Goal level on the Grade 8 CMT MAS Mathematics test **competently**:

Proficient Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 8 students who perform at this level are likely to demonstrate partially developed conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are partially accurate and include some explanations. Generally, for each grade-level content standard listed below, students who perform at the Proficient level on the Grade 8 CMT MAS Mathematics test **marginally**:

Basic Level

When provided with modifications such as more accessible presentation of text and graphics, embedded graphic organizers, and scaffolding of multi-step problems, Grade 8 students who perform at this level are likely to demonstrate limited conceptual understanding, computational skills, and problem-solving skills. Typically, the solutions these students provide to mathematics problems are inaccurate and include minimal to no explanations. Generally, for each grade-level content standard listed below, students who perform at the Basic level on the Grade 8 CMT MAS Mathematics test **have a limited ability to**:

NUMERICAL AND PROPORTIONAL REASONING

- Use place value concepts to identify alternative forms of representing numbers using scientific notation
- Represent fractions, decimals, and percents using various equivalent forms including numerical and pictorial representations
- Order and round fractions, mixed numbers, and decimals
- Identify the appropriate operation and write a story problem to match a given equation
- Compute sums, differences, products, and quotients of whole numbers and decimals
- Add, subtract, multiply fractions/mixed numbers and add or multiply integers
- Solve problems involving whole numbers, fraction, mixed numbers, and decimals without extraneous information
- Identify the best expression to find an estimate and identify whether and why a particular strategy will result in an over/under estimate.
- Compute with percents and solve problems involving ratios, proportions, and percents

GEOMETRY AND MEASUREMENT

- Determine volume and solve problems involving conversions of customary or metric units of measure
- Identify, describe, classify, and draw geometric shapes and figures
- Use spatial reasoning to solve problems involving congruence, transformations, and the location of points on four-quadrant coordinate grids; relate 2- and 3-dimensional representations of objects

WORKING WITH DATA: PROBABILITY AND STATISTICS

- Read and interpret data in tables, graphs, charts and draw graphs using a given set of data
- Identify or state a reasonable conclusion from data in tables, graphs, charts, and solve problems involving measures of central tendency
- Solve problems involving elementary notions of probability
- Sort, classify, and draw logical conclusions from data and solve problems involving the organization of data

ALGEBRAIC REASONING: PATTERNS AND FUNCTIONS

- Extend or complete patterns involving numbers or attributes and identify rules for patterns
- Evaluate algebraic and numerical expressions, represent situations with algebraic expressions and solve equations