

## NSCAS–Alternate Achievement Level Descriptors Mathematics Grade 5

	Developing	On Track	Advanced
<b>Extended Indicator</b>	<b>Developing</b> learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student may need additional support for academic success at the next grade level.	<b>On Track</b> learners demonstrate proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.	<b>Advanced</b> learners demonstrate high levels of proficiency in the knowledge and skills necessary at this grade level, as specified in the assessed Nebraska College and Career Ready Standards. These results provide evidence that the student will likely be ready for academic success at the next grade level.
	<b>Students at this level</b>	<b>Students at this level</b>	<b>Students at this level</b>
<b>MAE 5.N.1.a</b>	Recognize the numeral that is represented by groups of tens, limited to multiples of ten up to 200.	Identify the numeral that is represented by groups of hundreds and tens, limited to multiples of 10 from 100 to 200.	Identify the numeral that is represented by groups of hundreds, tens, and ones from 100 to 200.
<b>MAE 5.N.1.c</b>	Recognize $10^1$ as being equal to 10.	Identify 100, 1,000, or 10,000 as a power of 10 when given the equivalent multiplication expression.	Represent 10, 100, 1,000, or 10,000 as a power of 10.
<b>MAE 5.N.2.a</b>	Recognize fractions equivalent to one whole when given models, limited to denominators up to 10 (e.g., $5/5 = 1$ whole).	Use models to identify fractions equivalent to one-half, limited to denominators up to 10. (e.g., $3/6 = 1/2$ ).	Use models to represent equivalent fractions with thirds, fourths, and fifths, limited to denominators up to 10 (e.g., $2/10 = 1/5$ ).
<b>MAE 5.N.2.b</b>	Order whole numbers 1–100, and use symbols to compare whole numbers 1–100.	Order whole numbers 101–200. Use symbols to compare whole numbers 110–190, limited to multiples of 10.	Use symbols to compare all whole numbers 101–200.
<b>MAE 5.N.3.b</b>	Use a fraction model to multiply $1/3$ , $1/2$ , and $1/4$ by 2.	Use a fraction model to multiply $1/3$ , $1/2$ , and $1/4$ by 3 and 4.	Use a fraction model to multiply $1/3$ , $1/2$ , and $1/4$ by each other.
<b>MAE 5.N.3.c</b>	Use a fraction model to divide 1 whole by $1/3$ , $1/2$ , and $1/4$ .	Use a fraction model to divide the whole numbers 2–5 by $1/3$ , $1/2$ , or $1/4$ .	Use a fraction model to divide whole numbers greater than 5 by $1/3$ , $1/2$ , or $1/4$ .
<b>MAE 5.N.3.d</b>	Use a visual model to solve authentic problems involving addition and subtraction of unit fractions.	Use a visual model to solve authentic problems involving addition and subtraction of fractions with numerators greater than 1.	Use a visual model to solve authentic problems involving multiplication of fractions.
<b>MAE 5.N.3.e</b>	Use visual models to add and subtract two unit fractions with like denominators of halves, thirds, fourths, and fifths, limited to minuends and sums with a maximum of 1 whole (e.g., $1/5 + 1/5$ , $1/5 - 1/5$ ).	Use visual models to add and subtract two fractions with like denominators of halves, thirds, fourths, and fifths, limited to minuends and sums with a maximum of 1 whole (e.g., $1/5 + 2/5$ , $5/5 - 3/5$ ).	Use visual models to add and subtract more than two fractions with like denominators of halves, thirds, fourths, and fifths, limited to minuends and sums with a maximum of 1 whole (e.g., $1/5 + 1/5 + 1/5$ , $5/5 - 1/5 - 1/5$ ).

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<b>MAE 5.N.3.f</b>	Use a fraction model to solve authentic problems that involve dividing 1 whole by $\frac{1}{3}$ , $\frac{1}{2}$ , or $\frac{1}{4}$ .	Use a fraction model to solve authentic problems that involve dividing the whole numbers 2–5 by $\frac{1}{3}$ , $\frac{1}{2}$ , or $\frac{1}{4}$ .	Use a fraction model to solve authentic problems that involve dividing whole numbers greater than 5 by $\frac{1}{3}$ , $\frac{1}{2}$ , or $\frac{1}{4}$ .
<b>MAE 5.N.3.g</b>	Add and subtract two decimal numbers with sums and minuends 0 through 0.9 and at most one decimal place, limited to no regrouping (e.g., $0.4 + 0.1$ , $0.5 - 0.2$ ).	Add and subtract two decimal numbers with sums and minuends 1.0 through 4.9 and at most one decimal place, limited to no regrouping (e.g., $1.4 + 2.3$ , $4.3 - 2.1$ ).	Add and subtract two decimal numbers with sums and minuends 5.0 through 10.0 and at most one decimal place, limited to no regrouping (e.g., $5.3 + 2.3$ , $8.3 - 2.2$ ).
<b>MAE 5.A.1.a</b>	Multiply using the factors 1–5. Multiply the numbers 1–20 by 1.	Multiply the numbers 6–9 by the numbers 2–10.	Multiply the numbers 11–20 by 2, 3, 4, and 5.
<b>MAE 5.A.1.b</b>	Divide a two-digit multiple of 10 by a single-digit whole number in which the quotient is 10 (e.g., $30 \div 3 = 10$ , $70 \div 7 = 10$ ).	Divide a two-digit number by 2 and 5, limited to quotients with no remainders.	Divide a two-digit number by 3, 4, 6, 7, 8, and 9, limited to quotients with no remainders.
<b>MAE 5.A.1.c</b>	Recognize the estimated sum when two decimal numbers with one decimal place are rounded to the nearest whole number, limited to numbers 0–10.	Estimate the sum of two decimal numbers with one decimal place in which one addend has a zero in the tenths place, limited to numbers 0–10 (e.g., $5.0 + 3.7$ ).	Estimate the sum of two decimal numbers with one decimal place in which both addends have values greater than zero in the tenths place, limited to numbers 0–10 (e.g., $5.2 + 3.7$ ).
<b>MAE 5.A.1.d</b>	Recognize that parentheses indicate the first step in solving a two-step expression.	Evaluate two-step numerical expressions involving addition and multiplication or subtraction and multiplication, where parentheses are used to indicate the first step in evaluating the expression, limited to digits 1–5 (e.g., $4 \times (5 - 2)$ , $2 \times (4 + 2)$ ).	Use the correct order of operations to evaluate two-step numerical expressions involving addition and multiplication or subtraction and multiplication, limited to expressions without parentheses and to the digits 1–5 (e.g., $4 \times 5 - 2$ , $4 + 2 \times 3$ ).
<b>MAE 5.G.1.a</b>	Recognize a face on a cube or rectangular prism when given a visual model of an identical cube or identical rectangular prism.	Identify a face, an edge, or a vertex on a cube or other rectangular prism when given a definition or similar model.	Identify a face, an edge, or a vertex on a cube or other rectangular prism.
<b>MAE 5.G.1.b</b>	Recognize a two-dimensional (flat) or a three-dimensional (solid) figure when given a visual model of an identical figure.	Identify a two-dimensional (flat) or a three-dimensional (solid) figure when given a definition and/or a visual model.	Identify the difference between a two-dimensional (flat) and three-dimensional (solid) figure.
<b>MAE 5.G.1.c</b>	Recognize an acute, right, or obtuse triangle when given a visual model of an identical triangle.	Identify a triangle as acute, right, or obtuse when given a definition and/or a visual model.	Classify triangles as acute, right, or obtuse.
<b>MAE 5.G.2.a</b>	Recognize the x-axis of a coordinate plane when given a visual model.	Identify the x-axis and y-axis of a coordinate plane.	Identify the origin as the point where the x-axis and y-axis intersect on a coordinate plane.

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<b>MAE 5.G.2.b</b>	Recognize the missing value for $x$ in a coordinate pair when the value is indicated on the $x$ -axis or recognize the missing value for $y$ in a coordinate pair when the value is indicated on the $y$ -axis, limited to the first quadrant of a coordinate plane.	Identify the missing value for $x$ in a coordinate pair when the $x$ -axis is indicated and identify the missing value for $y$ in a coordinate pair when the $y$ -axis is indicated, limited to the first quadrant of a coordinate plane.	Identify the $x$ - or $y$ -coordinate of a point in the first quadrant of a coordinate plane.
<b>MAE 5.G.2.c</b>	Recognize an object in the first quadrant of a coordinate plane when given an ordered pair containing whole numbers.	Identify (i.e., name) the location of a point in the first quadrant of a coordinate plane when given an ordered pair containing whole numbers (e.g., Which point is located at $(2, 2)$ ?).	Identify the ordered pair containing whole numbers of a point in the first quadrant of a coordinate plane (e.g., What is the location of point D?).
<b>MAE 5.G.3.a</b>	Recognize that 1 foot = 12 inches, 1 hour = 60 minutes, and 1 yard = 3 feet in authentic mathematical situations when given visual models.	Identify simple conversions from larger units to smaller units and smaller units to larger units in authentic mathematical situations, limited to 2 feet = 24 inches, 2 hours = 120 minutes, and 2 yards = 6 feet.	Generate simple conversions from larger units to smaller units and smaller units to larger units (feet/inches, hours/minutes, or yards/feet) in authentic mathematical situations involving more than 2 feet or 24 inches, more than 2 hours or 120 minutes, less than 1 hour or 60 minutes, or more than 2 yards or 6 feet.
<b>MAE 5.G.4.c</b>	Use concrete and/or visual models to count unit cubes and recognize the volume of a single-layer rectangular prism when given the definition of volume.	Use concrete and/or visual models to count unit cubes and identify the volume of a multilayer rectangular prism when given the definition of volume.	Use concrete and/or visual models to measure the volume of a multilayer rectangular prism by counting unit cubes.
<b>MAE 5.G.4.d</b>	Recognize a repeated addition problem that represents the total number of unit cubes in a single-layer rectangular prism.	Identify a repeated addition problem that represents the volume of a multilayer rectangular prism.	Determine the multiplication problem that is equal to a repeated addition problem that represents the volume of a multilayer rectangular prism.
<b>MAE 5.G.4.e</b>	Use visual models to solve authentic problems by counting unit cubes to recognize the volume of a single-layer rectangular prism.	Use visual models to solve authentic problems by counting unit cubes to identify the volume of a two- or three-layer rectangular prism.	Use visual models to solve authentic problems by counting unit cubes to find the volume of a rectangular prism with more than three layers.
<b>MAE 5.D.2.a</b>	Recognize accurate data representations on tables, pictographs, and bar graphs, limited to a maximum of two categories of data, and scale/increments/key of 1.	Identify accurate data representations on tables, pictographs, bar graphs, and line plots, limited to three categories of data and scale/increments/key of 1.	Represent data on tables, pictographs, bar graphs, and line plots with more than three categories.