

NSCAS–Alternate Achievement Level Descriptors Mathematics Grade 4

	Developing	On Track	Advanced
Extended Indicator	Developing 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.	On Track 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.	Advanced 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.
	Students at this level	Students at this level	Students at this level
MAE 4.N.1.a	Recognize the numeral that is represented by groups of ten, limited to multiples of ten from 20 to 100.	Identify the numeral that is represented by groups of tens and ones from 21 to 100.	Identify quantities of objects that represent whole numbers up to 100.
MAE 4.N.1.b	Use symbols to compare whole numbers from 1 to 20.	Use symbols to compare double-digit numbers from 21 to 50, using the digits in the ones place to make the comparison (e.g., $21 < 25$, $37 > 32$).	Use symbols to compare double-digit numbers from 21 to 50, using the digits in the tens place and the ones place to make the comparison (e.g., $32 > 21$, $25 < 35$).
MAE 4.N.1.d	Identify fractions with a denominator of ten on a number line from 0 to 1.	Identify decimals (tenths from 0 to 1) on a number line from 0 to 1.	Use decimal notation for fractions from 0 to 1 with a denominator of 10.
MAE 4.N.2.a	Use fraction models or number lines to compare mixed numbers with denominators up to 5.	Use fraction models or number lines to order mixed numbers with denominators up to 5.	Compare and order mixed numbers with denominators up to 5.
MAE 4.N.3.c	Use visual models to add and subtract unit fractions with like denominators of halves, thirds, and fourths, limited to minuends and sums with a maximum of 1 whole and two fractions (e.g., $1/2 + 1/2$, $1/3 - 1/3$).	Use visual models to add and subtract fractions with like denominators of halves, thirds, and fourths, limited to minuends and sums with a maximum of 1 whole and two fractions (e.g., $1/3 + 2/3$, $4/4 - 3/4$).	Use visual models to add and subtract more than two fractions with like denominators of halves, thirds, and fourths, limited to minuends and sums with a maximum of 1 whole (e.g., $1/3 + 1/3 + 1/3$, $4/4 - 1/4 - 1/4$).
MAE 4.N.3.d	Use visual models to solve authentic addition and subtraction problems involving unit fractions with like denominators of halves, thirds, and fourths, limited to minuends and sums with a maximum of 1 whole and two fractions (e.g., $1/2 + 1/2$, $1/3 - 1/3$).	Use visual models to solve authentic addition and subtraction problems involving fractions with like denominators of halves, thirds, and fourths, limited to minuends and sums with a maximum of 1 whole and two fractions (e.g., $1/3 + 2/3$, $4/4 - 3/4$).	Use visual models to solve authentic addition and subtraction problems involving more than two fractions with like denominators of halves, thirds, and fourths, limited to minuends and sums with a maximum of 1 whole (e.g., $1/3 + 1/3 + 1/3$, $4/4 - 1/4 - 1/4$).

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MAE 4.N.4.a	Recognize a numeral skip-counting pattern of 2s, 5s, or 10s when given models or objects, limited to patterns up to 20.	Use models or objects to extend (i.e., identify the next number) in a given skip-counting pattern of 2s, 5s, or 10s, limited to patterns up to 50.	Count by 2s, 5s, and 10s with numbers up to 50.
MAE 4.N.4.b	Recognize two factors of 4, 6, 8, 9, 10, 12, 15, and 20 when given a multiplication equation. Recognize a group of objects as evenly divided into two shares, limited to groups with a maximum of 20 objects.	Identify two factors of 4, 6, 8, 9, 10, 12, 15, or 20 when given an array or other model. Use groupings of objects to identify the numbers 1–20 as odd or even.	Identify numbers 1–20 as odd or even, and identify the factors of 4, 6, 8, 9, 10, 12, 15, and 20.
MAE 4.A.1.a	Add a two-digit number with a maximum value of 20 to a single-digit number with regrouping. Subtract a single-digit number from a two-digit number with a maximum value of 20 with regrouping.	Add a two-digit number from 21 to 50 to a single-digit number with regrouping. Subtract a single-digit number from a two-digit number from 21 to 50 with regrouping.	Add a two-digit number greater than 50 to a single-digit number with regrouping. Subtract a single-digit number from a two-digit number greater than 50 with regrouping. Add two-digit numbers to other two-digit numbers, and subtract two-digit numbers from other two-digit numbers.
MAE 4.A.1.b	Multiply the numbers 2, 5, and 10 by the numbers 1 and 2.	Multiply the numbers 2, 5, and 10 by the numbers 3, 4, and 5.	Multiply the numbers 2, 5, and 10 by the numbers 6, 7, 8, and 9.
MAE 4.A.1.c	Recognize a division equation that represents a model, limited to equal groups up to 10.	Identify a division equation that represents a model with equal groups of 12–20.	Use models to represent division without a remainder, limited to groups up to 20.
MAE 4.A.1.d	Recognize the estimated product when one- and two-digit numbers are rounded to the nearest ten, limited to a maximum product of 30.	Round one- and two-digit whole numbers to estimate two-digit products up to 50.	Round one- and two-digit whole numbers to estimate two-digit products greater than 50.
MAE 4.A.1.e	Recognize the addition or subtraction equation that represents an authentic situation, limited to equations that use a blank line or empty box for the unknown result.	Identify the addition or subtraction equation that represents an authentic situation, limited to equations that use a variable for the unknown result.	Identify the addition or subtraction equation that represents an authentic situation, limited to equations that use a variable for the unknown change.
MAE 4.A.1.f	Solve one-step authentic problems involving addition and subtraction, limited to addends and minuends with a maximum value of 20 and problems without variables.	Solve one-step authentic problems, with and without variables, involving addition and subtraction, limited to addends and minuends from 21 to 50.	Solve one-step authentic problems, with and without variables, involving addition and subtraction, limited to addends and minuends from 51 to 99.
MAE 4.G.1.a	Recognize a point, line, line segment, or ray when given a model of a point, line, line segment, or ray.	Identify points, lines, line segments, rays, angles, parallel lines, and intersecting lines when given a definition.	Differentiate between parallel lines and intersecting lines, rays and angles, lines and line segments.

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MAE 4.G.1.b	Recognize a right angle when given a model of a right angle.	Identify acute and obtuse angles when given a definition or other method of comparing to a right angle.	Classify angles as acute, obtuse, or right.
MAE 4.G.1.c	Recognize a quadrilateral as a shape with four sides and four angles when given a model of a quadrilateral.	Identify right angles, non-right angles, parallel lines, and perpendicular lines in a quadrilateral. Classify quadrilaterals based on the presence or absence of perpendicular lines and right angles.	Classify quadrilaterals based on the presence or absence of parallel lines.
MAE 4.G.1.d	Recognize a two-dimensional shape with a line of symmetry when given a two-dimensional shape with a line of symmetry.	Identify a line of symmetry in a two-dimensional shape.	Identify more than one line of symmetry in a two-dimensional shape.
MAE 4.G.2.a	Recognize a unit of measurement, limited to customary units.	Identify the appropriate unit of measurement to use to solve an authentic problem involving time, length, weight, and liquid volume, limited to customary units.	Use the appropriate units of measurement to solve authentic problems involving time, length, weight, and liquid volume, limited to customary units.
MAE 4.G.2.c	Recognize that 1 week = 7 days, 1 year = 12 months, 1 hour = 60 minutes, and 1 foot = 12 inches when given visual models.	Identify a simple conversion from larger units to smaller units, limited to 2 weeks = 14 days, 2 years = 24 months, 2 hours = 120 minutes, and 2 feet = 24 inches.	Generate simple conversions from larger units to smaller units (weeks/days, years/months, hours/minutes, or feet/inches) involving more than 2 weeks, more than 2 years, more than 2 hours, or more than 2 feet.
MAE 4.G.2.d	Recognize that two adjacent* right angles form a straight line. *The term “adjacent” is not measured.	Identify a straight line as 180 degrees. Identify right angles as 90 degrees on perpendicular lines.	Identify perpendicular lines. Identify the straight lines as 180 degrees and the angles as 90 degrees on perpendicular lines.
MAE 4.G.3.a	Recognize an equation in the form of $P = l + w + l + w$ as being the perimeter formula for a rectangle.	Apply the perimeter formula for rectangles in the form of $P = l + w + l + w$ to solve authentic problems.	Apply the perimeter formula for rectangles in the form of $P = 2l + 2w$ to solve authentic problems.
MAE 4.D.1.a	Recognize two categories that have equal quantities in a line plot, limited to two data points.	Compare quantities in a line plot, limited to picture representations on the horizontal axis and two data points.	Compare quantities in a line plot with numbers on the horizontal axis, limited to two data points.

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MAE 4.D.2.a	Solve problems with addition and subtraction of whole numbers using information from pictographs, bar graphs, and line plots. Limited to a key of 1 for pictographs, a scale with increments of 1 for bar graphs, and picture representations on the horizontal axis of line plots. Limited to two categories.	Solve problems with addition and subtraction of whole numbers using information from pictographs, bar graphs, and line plots. Limited to a key of 1 for pictographs, a scale with increments of 1 for bar graphs, and picture representations on the horizontal axis of line plots. Limited to three categories.	<p>Solve problems with addition and subtraction of whole numbers using information from pictographs with more than three categories and/or a key greater than 1.</p> <p>Solve problems with addition and subtraction of whole numbers using information from bar graphs with more than three categories and/or a scale with increments greater than 1.</p> <p>Solve problems with addition and subtraction of whole numbers using information from line plots with three or more categories and with numbers on the horizontal axis.</p>