

Fourth Grade AKS Revisions For Common Core

New AKS Aligned to Common Core Standards

- Explain a multiplication equation as a comparison and represent verbal statements of multiplicative comparisons as multiplication equations (e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5) (1.OA.1)
- Solve multiplication and division word problems involving multiplicative comparison using drawings and equation (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison) (2.OA.2)
- Generate a number or shape pattern that follows a given rule; identify apparent features of the pattern that were not explicit in the rule itself (given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers; explain informally why the numbers will continue to alternate in this way) (8.OA.5)
- Illustrate and explain multiplication calculations by using equations, rectangular arrays, and/or area models (14.NBT.5)
- Illustrate and explain division calculations by using equations, rectangular arrays, and/or area models (16.NBT.6)



- Model and explain that a fraction a/b with $a > 1$ is a sum of fractions $1/b$. (21.NF.3)
- Solve word problems involving multiplication of a fraction by a whole number (e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat $3/8$ of a pound of roast beef and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?) (29.NF.4)
- Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100 (e.g., express $3/10$ as $30/100$ and add $3/10$ and $4/100 = 34/100$) *Students who can generate equivalent fractions can develop strategies adding fractions with unlike denominators in general. But addition and subtraction with unlike denominators in general is not a requirement at this grade.* (30.NF.5)
- Solve word problems by applying the four operations to problems involving whole number, decimal and fractional distances, intervals of time, liquid volumes, masses of objects, and money. (36.MD.2)

AKS Moving to Fourth Grade

Grade Moved From

Explain the different meanings of the remainder in division problems (5.OA.3)	3rd
Determine multiples and factors for whole numbers 1-100 (6.OA.4)	5th
Determine whether a given whole number in the range 1-100 is prime or composite (7.OA.4)	5th
Explain that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right (e.g., recognize that $700 \div 70 = 10$ by applying concepts of place value and division) (9.NBT.1)	3rd
add and subtract multi-digit whole numbers fluently using the standard algorithm. (13.NBT.4)	2nd
Use the symbols $>$, $=$, or $<$ to compare fractions and justify the conclusions by using a visual fraction model. (20.NF.2)	5th
Model and explain addition and subtraction of fractions with like denominators as joining and separating parts referring to the same whole. (22.NF.3)	3rd
Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators by using visual fraction models and equations to represent the problem (25.NF.3)	3rd

Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size; use this principle to recognize and generate equivalent fractions (18.NF.1)

Create a line plot to display a data set of measurements in fractions of a unit ($1/2, 1/4, 1/8$); solve problems involving addition and subtraction of fractions by using information presented in line plots (from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection) (39.MD.4)

Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint and understand concepts of angle measurement. (40.MD.5)

Recognize that an angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle; an angle that turns through $1/360$ of a circle is called a "one-degree angle", and can be used to measure angles (41.MD.5)

Model and explain angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts (44.MD.7)

Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems by using an equation with a symbol for the unknown angle measure. (45.MD.7)

Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. (48.G.2)

**Transitional AKS:
Teach in 2012-2013 Only**

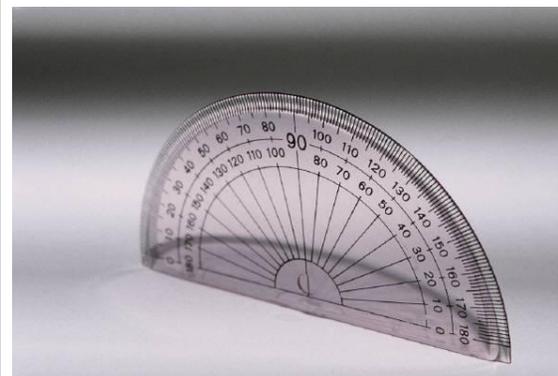
There are no transitional AKS for fourth grade.



This list is not comprehensive but reflects revisions to Fourth Grade Mathematics AKS.

A complete list of AKS is located on the Math Website (MOCC).

Compare one unit to another within a single system of linear measurement and record measurement equivalents in a two-column table, including km, m, cm, yd, ft, in. (e.g., 1 ft is 12 times as long as 1 in; express the length of a 4 ft. snake as 48 inches) (33.MD.1)	3rd
Compare one unit to another within a single system of capacity measurement and record measurement equivalents in a two-column table, including l, ml, c, pt, qt, gal. (34.MD.1)	5th
Apply the area and perimeter formulas for rectangles in real world and mathematical problems. (38.MD.3)	3rd
Identify and draw lines of symmetry for two-dimensional figures. (49.G.3)	3rd



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