

# 4<sup>th</sup> Grade

Math Common Core

“I Can” Checklists



# Math Common Core

## Operations and Algebraic Thinking

**Use the four operations with whole numbers to solve problems.**

1. ☐ **I can** interpret a multiplication equation as a comparison.
- ☐ **I can** interpret a multiplication comparison as an equation.
2. ☐ **I can** multiply to solve word problems involving multiplication comparisons.
- ☐ **I can** divide to solve word problems involving multiplication comparisons.
- ☐ **I can** use drawings and equations to represent problems.
3. ☐ **I can** solve multistep word problems using the four operations (whole numbers only).
- ☐ **I can** solve division problems in which the remainder must be interpreted.

☐

**I can** represent problems using equations with a letter standing for the unknown number.

☐

**I can** check if my answer is reasonable using mental math and estimation.

### **Gain familiarity with factors and multiples.**

**4.** ☐ **I can** find all the factor pairs for a whole number in the range 1-100.

☐

**I can** recognize that a whole number is a multiple of each of its factors.

☐

**I can** determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number.

☐

**I can** determine whether a given whole number in the range 1-100 is prime or composite.

### **Generate and analyze patterns.**

**5.** ☐ **I can** create a number or shape pattern that follows a given rule.

☐

**I can** identify features of a pattern that were not obvious in the rule itself.

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## Number and Operations in Base Ten

**Generalize place value understanding for multi-digit whole numbers.**

1. ☐ **I can** recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.
2. ☐ **I can** read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form.  
☐ **I can** compare two multi-digit numbers based on meanings of the digits in each place, using  $>$ ,  $=$ , and  $<$  symbols to record the results of the comparisons.
3. ☐ **I can** use place value understanding to round multi-digit whole numbers to any place.

**Use place value understanding and properties of operations to perform multi-digit arithmetic.**

4. ☐ **I can** fluently add and subtract multi-digit whole numbers.

5. ☐ **I can** multiply a whole number of up to four digits by a one-digit whole number.
- ☐ **I can** multiply two two-digit numbers.
- ☐ **I can** illustrate and explain my calculations by using equations, rectangular arrays, and area models.
6. ☐ **I can** find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors.
- ☐ **I can** illustrate and explain my calculations by using equations, rectangular arrays, and area models.

# Math Common Core

## Number and Operations—Fractions

**Extend understanding of fraction equivalence and ordering.**

1. ☐ **I can** explain why a fraction is equivalent to another fraction by using visual fraction models.
- ☐ **I can** recognize and create equivalent fractions.
2. ☐ **I can** compare two fractions with different numerators and different denominators.
- ☐ **I can** create common denominators and numerators.
- ☐ **I can** compare fractions to a benchmark fraction.
- ☐ **I can** recognize that comparisons are only valid when the two fractions refer to the same whole.
- ☐ **I can** record the results of comparisons with symbols  $>$ ,  $=$ , or  $<$ , and justify my conclusions.

**Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.**

- 3.** ☐ **I can** understand a fraction  $\frac{3}{4}$  with  $3 > 1$  as a sum of fractions  $\frac{1}{4}$  (*these numbers are used as an example*).
- a.** ☐ **I can** understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
- b.** ☐ **I can** decompose a fraction into a sum of fractions with the same denominator in more than one way.
- ☐ **I can** record each decomposition by an equation.
- ☐ **I can** justify my decompositions.
- c.** ☐ **I can** add and subtract mixed numbers with like denominators.
- d.** ☐ **I can** solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators.
- ☐ **I can** use visual fraction models and equations to represent a problem.

4. ☐ **I can** apply and extend my previous understandings of multiplication to multiply a fraction by a whole number.
- a. ☐ **I can** understand a fraction  $\frac{3}{4}$  as a multiple of  $\frac{1}{4}$  (*these numbers are used as an example*).
- b. ☐ **I can** understand a multiple of  $\frac{3}{4}$  as a multiple of  $\frac{1}{4}$ , and use this understanding to multiply a fraction by a whole number (*these numbers are used as an example*).
- c. ☐ **I can** solve word problems involving multiplication of a fraction by a whole number.
- ☐ **I can** use visual fraction models and equations to represent a problem.

**Understand decimal notation for fractions, and compare decimal fractions.**

5. ☐ **I can** express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with denominators 10 and 100.
6. ☐ **I can** use decimal notation for fractions with denominators 10 or 100.



7. ☐ **I can** compare two decimals to the hundredths place by reasoning about their size.
- ☐ **I can** recognize that comparisons are valid only when the two decimals refer to the same whole.
- ☐ **I can** record the results of comparisons with the symbols  $>$ ,  $=$ , or  $<$ , and justify my conclusions.

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## Measurement and Data

**Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.**

1. ☐ **I can** identify relative sizes of measurement units within one system of units.
- ☐ **I can** convert measurements in a larger unit to a smaller unit within the same system of measurement.
- ☐ **I can** record measurement equivalents in a two-column table.
  
2. ☐ **I can** use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money.
- ☐ **I can** solve problems that include simple fractions or decimals, and problems that require converting larger units into smaller units.
- ☐ **I can** represent measurement quantities using diagrams, such as number line diagrams that feature a measurement scale.

3. ☐ **I can** apply the area and perimeter formulas for rectangles in real world and mathematical problems.

**Represent and interpret data.**

4. ☐ **I can** make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ , etc.).
- ☐ **I can** solve problems involving addition and subtraction of fractions by using information presented in line plots.

**Geometric measurement: understand concepts of angles and measure angles.**

5. ☐ **I can** recognize angles as geometric shapes that are formed whenever two rays share a common endpoint.
- ☐ **I can** understand concepts of angle measurement.
- a. ☐ **I can** understand that a “one-degree angle” can be used to measure angles.
- b. ☐ **I can** understand that an angle that turns through  $n$  one-degree angles is said to have an angle measure of  $n$  degrees.

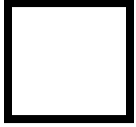
6. ☐ **I can** measure angles in whole-number degrees using a protractor.
- ☐ **I can** sketch angles of a specified measure.
7. ☐ **I can** recognize angle measure as additive.
- ☐ **I can** solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems.

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## Geometry

**Draw and identify lines and angles, and classify shapes by properties of their lines and angles.**

1. ☐ **I can** draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines.  
☐ **I can** identify the above lines and angles in two-dimensional figures.
2. ☐ **I can** classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines.  
☐ **I can** classify two-dimensional figures based on the presence or absence of angles of a specified size.  
☐ **I can** recognize right triangles as a category, and identify right triangles.
3. ☐ **I can** recognize a line of symmetry for a two-dimensional figure.  
☐ **I can** identify line-symmetric figures.



**I can** draw lines of symmetry.

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All information in this document is from the ***Common Core State Standards for Mathematics***. Some information has been changed for clarity.