



Want to learn more about  
the CCSS?

Visit the Common Core State Standards website at

**[www.corestandards.org](http://www.corestandards.org)**

There you can find:

- \*The complete listing of the English Language Arts & Mathematics standards for each grade level.
- \*Which 45 of the 50 states have adopted the CCSS
- \*Resources

*A Parent  
Guide to  
Understanding  
Common Core  
State  
Standards  
Report Card*

**Grade  
3**



*Mathematics*



# How do I use this booklet to help me understand my child's report card?

You may have noticed that our report card looks very different this year. The new elementary report card is a standards based report card, which means the grading categories are directly related to the state standards. This booklet contains the new standards adopted by the state. In each major concept area you will find the bold category headings which were selected for the report card. Here is an example of what you will see on the report card and how to find those standards in this document.

## The Report Card:

<b>Operations &amp; Algebraic Thinking</b>	T1	T2	T3	T4
<b>Represent &amp; solve problems involving multiplication and division</b>				
Apply properties of operations as strategies to multiply				
Applies properties of operations as strategies to divide				
Multiplies and divides within 100				
Solves problems involving the 4 ...				

This booklet:

## Operations & Algebraic Thinking

**Represent and solve problems involving multiplication and division.**  
\* Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total ...

**For even more information and to view a more in depth parent guide with sample questions, please visit:**

[www.holmen.k12.wi.us](http://www.holmen.k12.wi.us)

Select the District tab-Instructional Services-Report Cards

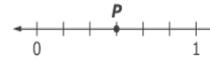


## Here is a sample assessment item related to the CCSSM.

2



Use this number line to answer the question that follows.



Choose all the number lines that show a fraction equal to the fraction shown by point P.



For more information related to standardized test items visit:

<http://www.smarterbalanced.org/>





## How is my child being assessed in these standards?

During the 2012-2013 school year, classroom teachers from across the district met monthly to identify what students should know, and be able to do, based on the Common Core State Standards for Mathematics (CCSSM). The district then selected Math Expressions to anchor the math program in grades K-5. The program provides a progression of teaching and learning that aligns with the CCSSM. Each unit contains assessments that measure student progress in relation to specific standards. Students will take assessments at the end of each unit, and teachers will review student data to ensure that students are meeting the CCSSM. Students will also complete a state assessment each year to determine how well they know the mathematics in the CCSSM at their grade level.

If you have more questions on the Common Core, please contact your child's teacher or the Instructional Services Department.

**School District of Holmen-Instructional Services**

**Director of Instruction**

Wendy Savaske [savwen@holmen.k12.wi.us](mailto:savwen@holmen.k12.wi.us)

**District Math Coordinator**

Doug Burge [burdou@holmen.k12.wi.us](mailto:burdou@holmen.k12.wi.us)



## When did Wisconsin adopt these standards?

In June, 2010, Wisconsin adopted the internationally benchmarked Common Core State Standards for Mathematics & English Language Arts. Wisconsin also adopted Standards for Literacy in All Subjects.

These standards provide the framework for a new assessment system beginning in 2014-15.



## Operations & Algebraic Thinking

### Represent and solve problems involving multiplication and division.

- \* Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as  $5 \times 7$ .
- \* Interpret whole-number quotients of whole numbers, e.g., interpret  $56 \div 8$  as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as  $56 \div 8$ .
- \* Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
- \* Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations  $8 \times ? = 48$ ,  $5 = \square \div 3$ ,  $6 \times 6 = ?$ .

### Understand properties of multiplication and the relationship between multiplication and division.

- \* *Apply properties of operations as strategies to multiply and divide.*  
*Examples: If  $6 \times 4 = 24$  is known, then  $4 \times 6 = 24$  is also known. (Commutative property of multiplication.)  $3 \times 5 \times 2$  can be found by  $3 \times 5 = 15$ , then  $15 \times 2 = 30$ , or by  $5 \times 2 = 10$ , then  $3 \times 10 = 30$ . (Associative property of multiplication.) Knowing that  $8 \times 5 = 40$  and  $8 \times 2 = 16$ , one can find  $8 \times 7$  as  $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$ . (Distributive property.)*
- \* *Understand division as an unknown-factor problem. For example, find  $32 \div 8$  by finding the number that makes 32 when multiplied by 8.*

### Multiply and divide within 100.

- \* *Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that  $8 \times 5 = 40$ , one knows  $40 \div 5 = 8$ ) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.*

## Mathematical Practice Standards

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.





## Measurement & Data (Continued)

- \* Relate area to the operations of multiplication and addition.
  - a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
  - b. Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
  - c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths  $a$  and  $b + c$  is the sum of  $a \times b$  and  $a \times c$ . Use area models to represent the distributive property in mathematical reasoning.
  - d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.

**Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.**

- \* Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

## Geometry

**Reason with shapes and their attributes.**

- \* Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
- \* Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as  $\frac{1}{4}$  of the area of the shape.



## Operations & Algebraic Thinking (Continued)

**Solve problems involving the four operations, and identify and explain patterns in arithmetic.**

- \* Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
- \* Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.

## Number and Operations in Base Ten

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

- \* Use place value understanding to round whole numbers to the nearest 10 or 100.
- \* Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
- \* Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g.,  $9 \times 80$ ,  $5 \times 60$ ) using strategies based on place value and properties of operations.



## Number and Operations - Fractions

### Develop understanding of fractions as numbers.

- \* Understand a fraction  $1/b$  as the quantity formed by 1 part when a whole is partitioned into  $b$  equal parts; understand a fraction  $a/b$  as the quantity formed by  $a$  parts of size  $1/b$ .
- \* Understand a fraction as a number on the number line; represent fractions on a number line diagram.
  - a. Represent a fraction  $1/b$  on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into  $b$  equal parts. Recognize that each part has size  $1/b$  and that the endpoint of the part based at 0 locates the number  $1/b$  on the number line.
  - b. Represent a fraction  $a/b$  on a number line diagram by marking off  $a$  lengths  $1/b$  from 0. Recognize that the resulting interval has size  $a/b$  and that its endpoint locates the number  $a/b$  on the number line.
- \* Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
  - a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
  - b. Recognize and generate simple equivalent fractions, e.g.,  $1/2 = 2/4$ ,  $4/6 = 2/3$ . Explain why the fractions are equivalent, e.g., by using a visual fraction model.
  - c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form  $3 = 3/1$ ; recognize that  $6/1 = 6$ ; locate  $4/4$  and 1 at the same point of a number line diagram.
  - d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model.

## Measurement & Data

### Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

- \* Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.
- \* Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).<sup>6</sup> Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.

### Represent and interpret data.

- \* Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.
- \* Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

### Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

- \* Recognize area as an attribute of plane figures and understand concepts of area measurement.
  - a. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.
  - b. A plane figure which can be covered without gaps or overlaps by  $n$  unit squares is said to have an area of  $n$  square units.
- \* Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).

