# Operations 4 Algebraic Thinking

3rd Grade—"I Can Do Math'

Sid Grade I Can Do Main
can write and solve problems using multiplication & division.  3.0A. I = I can understand multiplication by thinking about
groups of objects.
3.0A.2 - I can understand division by thinking about how one
group can be divided into smaller groups.
3.0A.3 - I can use what I know about multiplication and division
to solve word problems.
3.0A.4 - I can find the missing number in a multiplication or
division equation.
3.0A.5 - I can use the Commutative property of multiplication
(e.g. I know that if 6 x $4-24$ , then $4 \times 6 = 24$ ).
3.0A.5 - I can use the Associative property of multiplication
(e.g. To figure out 3 x 5 x 2, I can multiply 3 x 5 = 15, then 15 x 2 = $1000000000000000000000000000000000000$
30 OR multiply 5 x 2 = 10, then 3 x 10 = 30).
3.0A.5 - I can use the Distributive property of multiplication
(e.g. To figure out 8 x 7, I can think of 8 x (5 + 2) which means
$(8 \times 5) + (8 \times 2) = 40 + 16 = 56$ .
3.0A.6 - I can find the answer to a division problem by thinking
of the missing factor in a multiplication problem (e.g. I can figure
out 32 / 8 because I know that 8 x $4 = 32$ ).
3.0A.7 - I can multiply and divide.
3.0A.7.a - I can fluently multiply and divide within 100 easily and quickly because I know how multiplication and division are related.
3.0A.7.b 🗆 I can memorize all products of two one-digit numbers.
3.0A.8 - I can solve two-step word problems.
3.0A.8. $a \square I$ can solve two step-word problems that involve
addition, subtraction, multiplication, and division.
3.0A.8 .b 🗆 I can solve two-step word problems by writing an
equation with a letter in place of the number I don't know.
3.0A.8 .c 🗆 I can use mental math to figure out if the answers to
two-step word problems are reasonable.
3.0A.9 🗆 I can find patterns in addition and multiplication tables

and explain them using what I know about how numbers work.

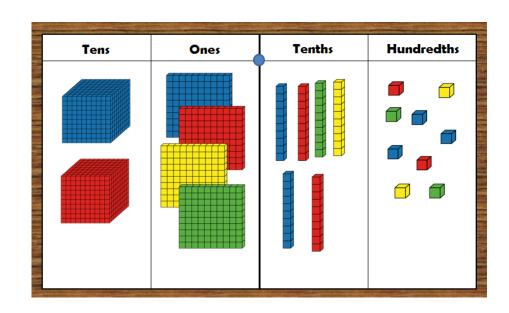
## Numbers 4

## Operations in Base 10

3rd Grade—"I Can Do Math"

I can use what I know about place value and operation (+, -, x, /) to solve problems with larger numbers.

- 3.NBT. I  $\Box$  I can use place value to help me round numbers to the nearest 10 or 100.
- 3.NBT.2  $\square$  I can quickly and easily add and subtract numbers within 1000.
- 3.NBT.3  $\Box$  I can multiply any one digit whole number by a multiple of IO (6 x 90, 4 x 30).



## Numbers 4

# Operations: Fractions

# 3rd Grade—"I Can Do Math" I can use what I know about place value to help me add and subtract.

add and Saphract.
3.NF.   🗆   can show and understand that fractions represent
equal parts of a whole, where the top number is the part and the
bottom number is the total number of parts in the whole.
3.NF. I .a $\square$ I can understand that a fraction (I/b) is the quantity formed by one part when a whole is broken into equal (b) parts.
3.NF. I. b = I can understand that a fraction (a/b) is the quantity formed by one part of (I/b).
3.NF. 2 🗆 I can understand a fraction as a number on the
number line by showing fractions on a number line diagram.
3.NF. 2.a 🗆 I can label fractions on a number line because I know
the space between any two numbers on the number line can be
thought of as a whole.
3.NF.2.b - I can show a fraction on a number line by marking off
equal parts between two whole numbers.
3.NF.3 🗆 I can understand how some different fractions can
actually be equal.
3.NF.3 🗆 I can compare fractions by reasoning about their size.
3.NF.3. a 🗆 I can understand two fractions as equivalent (equal) if they are the same size or at the same point on a number line.
3.NF.3. b 🗆 I can recognize and write simple equivalent (equal)
fractions and explain why they are equal using words or models.
3.NF.3. c $\Box$ I can show whole numbers as fractions (3 = 3/1).
3.NF.3. c 🗆 I can recognize fractions that are equal to one whole
(1 = 4/4).
3.NF.3. d $_{\Box}$ I can compare two fractions with the same numerator (topenumber) or the same denominator (bottom number) by
reasoning about their size.
3.NF.3. d □ I can understand that comparing two fractions is
only reasonable if they refer to the same whole.

3.NF.3. d  $_{\square}$  I can compare fractions with the symbols >, =, < and prove my comparison by using models.

## Neasurement 4

1 2 3 4 5 6 7 8 9

3rd Grade—"I Can Do Math"

## I can solve problems that involve measurement and estimation.

3.MD. I $_{\square}$ I can tell and write time to the near	rest minute	
--	-------------	--

- 3.MD. I I can measure time in minutes.
- 3.MD. I I can solve telling time word problems by adding and subtracting minutes.
- 3.MD. 2 I can measure liquids and solids with grams (g), kilograms (kg) and liters (l).
- 3.MD. 2 I can use addition, subtraction, multiplication, and division to solve word problems.

## I can understand how information is shared using numbers.

- 3.MD.3 I can make a picture or bar graph to show data and solve problems using the information from the graphs.
- 3.MD. 4 I can create a line plot from measurement data, where the measured objects have been measured to the nearest whole number, half, or quarter.

# Measurement 4 Data (cont.)

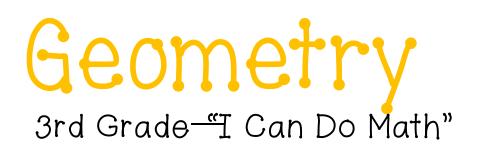
3rd Grade—"I Can Do Math"

### I can understand area.

- 3.MD.5 I can understand that one way to measure plane shapes is by the area they have.
- 3.MD. 5. a  $\Box$  I can understand that a "unit square" is a square with side lengths of I unit and it is used to measure the area of plane shapes.
- 3.MD. 5. b  $\square$  I can cover a plane shape with square units to measure it's area.
- 3.MD. 6  $\square$  I can measure areas by counting unit squares (square cm, square m, square in, square ft).
- 3.MD.  $7 ext{ } ext{l}$  can understand area by thinking about multiplication and addition.
- 3.MD. 7. a = 1 can find the area of a rectangle using square tiles and also by multiplying the two side lengths.
- 3.MD. 7. b  $\Box$  I can solve real—world problems about area using multiplication.
- 3.MD. 7. c  $\Box$  I can use models to show that the area of a rectangle can be found by using the distributive property (e.g. side lengths and b + c is the sum of a x b and a x c).
- 3.MD. 7. d  $\Box$  I can find the area of a shape by breaking it down into smaller shapes and then adding those areas to find the total area.

### I can understand perimeter.

3.MD.8  $\square$  I can solve real—world math problems using what I know about how to find the perimeter of shapes.



## I can understand shapes better by using what I notice about them.

- 3.6.1  $\Box$  I can place shapes into categories depending upon their attributes (parts).
- 3.6.1  $\square$  I can name a category of many shapes by looking at their attributes (parts).
- 3.6.2  $\square$  I can divide shapes into parts with equal areas and show those areas as fractions.

