

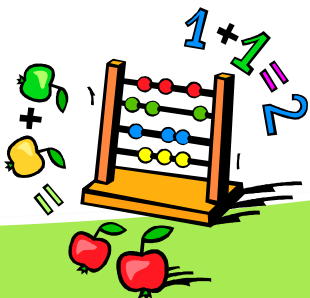
$$15+3=18$$

STANDARDS FOR MATHEMATICAL PRACTICE

The following practices allow students to become successful in learning mathematics.

WHEN WORKING A MATH PROBLEM, STUDENTS...

1. Look for ways to solve problems and discuss how they solved them.
2. Understand that numbers represent quantities and can be written with symbols.
3. Participate in mathematical discussions by explaining their thinking to others and respond to others' thinking. They ask questions like "How did you get that?" and "Why is that true?"
4. Represent problems in multiple ways numbers, words, pictures, objects, etc.
5. Consider available tools, including estimation, to solve a problem and decide which are most helpful.
6. Discuss answers with others and explain their own reasoning.
7. Begin to understand number patterns such as recognizing $3+2=5$ and $2+3=5$.
8. Notice patterns when adding and subtracting "ten". Continually check their work by asking "Does this make sense?"



HOW TO HELP YOUR CHILD AT HOME



- ★ Look for "word problems" in real life. Some 1st grade examples might include:
 - If you open a new carton of a dozen eggs, and you use four eggs to cook dinner, close the carton and ask your child how many eggs are left.
 - While putting away toys into bins, count the number of toys in two bins and ask your child how many more are in one bin compared to the other.
- ★ Count to 120 and count on from different numbers.
- ★ Ask your child what is 10 more than or 10 less than a given number.
- ★ Practice addition & subtraction facts to 20
- ★ Divide things into halves and fourths.
- ★ Practice using analog and digital clocks.
- ★ Play the "I'm thinking of a number" game. For example, "I'm thinking of a number that makes 11 when added to 8. What is my number?"
- ★ Play the "Mystery Shape" game. For example, "I'm thinking of a shape that is closed and has three sides. What is my shape?"
- ★ Compare the lengths of different objects around the house using different measuring tools.



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THE COMMON
CORE STATE
STANDARDS FOR
MATHEMATICS

1st GRADE

In 1st grade, your child will build on last year's work and gain important new skills.

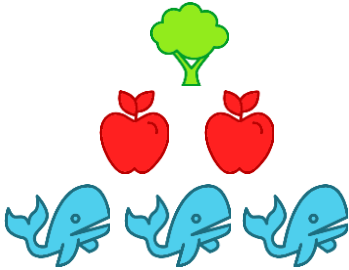
They will improve speed and accuracy with adding and subtracting numbers within 100, understand place value of ones and tens, and work with multi-digit addition.

This will set the stage for 2nd grade, when your child will be working with three-digit numbers and adding and subtracting with larger numbers.



OPERATIONS AND ALGEBRAIC THINKING

First graders represent and solve problems involving addition and subtraction and understand the relationship between these two operations.



EXAMPLES:

- ★ Adding and subtracting numbers within 20 and do this fluently within 10.

Using strategies to add and subtract

- To find $3+8$, use $8+3$
- To find $3+4+6$, use $3+10$
- To find $10-8$, use $8+\square=10$
- To find $4+3$, start at $4\dots 5, 6, 7$.
- To find $6+7$, $6+6+1$, $12+1=13$

WORD PROBLEM EXAMPLES:

- ★ 12 bunnies were sitting on the grass. Some more bunnies hopped there. Then there were 15 bunnies. How many bunnies hopped over to the first 12 bunnies?
 $12 + \square = 15$
- ★ 15 apples were on the table. We ate some apples. Then there were 6 apples. How many apples did we eat?
 $15 - \square = 6$
- ★ 17 apples are on the table. 14 are red and the rest are green. How many apples are green?
 $14 + \square = 17$ or $17 - 14 = \square$

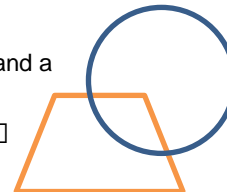
- ★ Lucy has 13 apples. Julie has 18 apples. How many more apples does Julie have than Lucy? or How many fewer apples does Lucy have than Julie?
 $13 + \square = 18$ or $18 - 13 = \square$
- ★ Julie has 10 more apples than Lucy. Lucy has 9 apples. How many apples does Julie have?
 $9 + 10 = \square$
- ★ Lucy has 10 fewer apples than Julie. Julie has 19 apples. How many apples does Lucy have?
 $19 - 10 = \square$ or $\square + 10 = 19$

NUMBERS AND OPERATIONS IN BASE TEN

First graders count, read, write, and represent numbers to 120. They understand place value and use it to add and subtract.

EXAMPLES:

- ★ Stating the number of tens and ones in a two-digit number.
 - 67 represents 6 tens and 7 ones
 - Numbers 11-19 include a ten and \square ones.
 - 10, 20, and 30... refer to 1 ten, 2 tens, 3, tens...
- ★ Using the symbols $>$, $=$, and $<$
- ★ Subtracting any two two-digit numbers that are multiples of 10 (including solving problems mentally).
 - $60-40=\square$ or $80-50=\square$
- ★ Solving problems like...
 - Adding a two-digit number and a one digit number
 $81 + 6 = \square$ or $37 + 5 = \square$
 - Adding a two-digit number and a multiple of 10
 $46 + 30 = \square$ or $72 + 20 = \square$



MEASUREMENT AND DATA

First graders represent and interpret data, tell and write time, and measure lengths.

EXAMPLES:

- ★ Asking and answering questions based on a chart or graph.



- ★ Telling and writing time in hours and half-hours using analog and digital clocks.
- ★ Measuring lengths by comparing objects to one another and by laying multiple copies of a shorter object end to end.



GEOMETRY

First graders reason with shapes and their attributes.

EXAMPLES:

- ★ Building and drawing shapes based on different attributes.
 - A closed shape with 3 sides.
- ★ Putting 2D and 3D shapes together to form a new shape.
- ★ Partitioning circles or rectangles into two or four equal parts and know that the more parts I have the smaller the pieces will be.

