MA.K.AR.1.3

Overarching Standard: MA.K.AR.1 *Represent and solve addition problems with sums between 0 and 10 and subtraction problems using related facts.*

Benchmark of Focus
MA.K.AR.1.3: Solve addition and subtraction real-world problems using objects, drawings, or equations to represent the problem.

Benchmark Clarifications
Clarification 1: Instruction includes understanding the context of the problem, as well as the quantities within the problem.

Clarification 2: Students are not expected to independently read word problems.

Clarification 3: Addition and subtraction are limited to sums within 10 and related subtraction facts.Refer to Situations Involving Operations with Numbers (Appendix A).

Related Benchmark/Horizontal Alignment

- MA.K.NSO.2.1
- MA.K.NSO.3.1/3.2
- MA.K.AR.2.1
- MA.K.M.1.3

Vertical Alignment

Previous Benchmarks	Next Benchmarks
VPK	MA.1.AR.1.2

Terms from the K-12 Glossary

- Equation

Purpose and Instructional Strategies
The purpose of this benchmark is to allow students to continue to flexibly discover various sums as they work towards procedural reliability in Kindergarten, and automaticity in grade 1. This benchmark allows students the opportunity to deepen understanding of addition and subtraction by connecting the concepts to real-world situations. Though this should not be the first exposure to contextual addition and subtraction problems, this benchmark provides the opportunity for making it explicit *(MTR.7.1)*.

- Instruction includes the relationship between addition and subtraction, providing opportunities for discovering subtraction facts that are related to addition facts *(MTR.5.1)*.

- Instruction includes opportunities for the use of various strategies and for students to collaborate and share strategies with each other *(MTR.2.1, MTR.4.1)*.

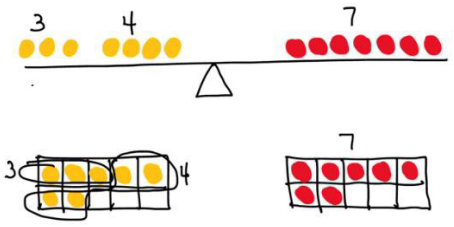
- Items or explanations including equations as strategies may help students begin to understand the meaning of the equal sign.

Common Misconceptions or Errors

- Students may not yet have an understanding of the equal sign when attempting to use equations as a strategy (see MA.K.AR.2.1).

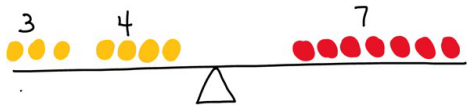
Strategies to Support Tiered Instruction

- Teacher provides manipulatives to build sets that represent equations and determine if they are true or false.
    - For example, the teacher provides students with the equation 3 + 4 = 7. Students build the addends using two-color counters with the yellow side facing up. Students build the sum with two-color counters with the red side facing up. Teacher asks "Are the two sides of the equation equal? Do they have the same value?" Students should count to find the sum of both sides and record the comparison as 7 = 7. Discussion should focus on the quantities on both sides of the equal sign being the same or different.



- Instruction includes opportunities to use money manipulatives (dollar bills) to build knowledge of enough.
    - For example, in groups, teacher provides students with eight 1-dollar bills. Teacher provides picture cards with costs labeled of things the students could buy with their eight 1-dollar bills. Teacher asks: Do you have enough money to buy the sticker and the lollipop? Do you have enough money to buy a book and a pencil? Discussion should focus on if the student has enough money to buy the items.

- Teacher provides a math number balance to explore the equal sign with quantities from 1 to 10.
    - For example, students can build the equation 3 + 2 = 6 and determine if the equation is true.



Questions to ask students:

What is the action in the problem?

- *Sample answer that indicates understanding*: putting together, joining, adding to, taking from, separating, etc.

How do you know you are putting together, joining, or adding to?

- *Sample answer that indicates understanding:* Children can correctly identify the action in the problem. Consider the problem, "There are 2 students at the water fountain. Two more get in line. How many students are in the water fountain?" The child should be able to identify the action is adding to.

How do you know you are taking from or separating?

- *Sample answer that indicates understanding:* Children can correctly identify the action in the problem. Consider the problem, "Joseph is holding 4 crayons. Miracle takes one. How many crayons does Joseph have now?" The child should be able to identify the action is taking from.

Instructional Tasks

Instructional Task 1

Dani colored 3 pages of a coloring book and Ciara colored 2 pages of the same coloring book. How many pages did they color all together?

Instructional Items

Instructional Item 1

Stan found 7 easter eggs in all while hunting for easter eggs. In his backyard he found 3.How many easter eggs did Stan find elsewhere?

Instructional Item 2

Eddie has 5 tokens in his class prize baggy. He needs 8 tokens in order to get a prize from the class treasure box. How many more tokens does Eddie need in order to get a prize?

Additional Resources:
CPALMS: MA.K.AR.1.3

Khan Academy Video: Addition word problems within 10

Khan Academy Video: Subtraction word problems within 10

Resources/Tasks to Support Your Child at Home:
Have your child using counters (cereal, coins, toys, etc) to represent addition and subtraction word problems (total within 10). Consider creating your own word problems based on interests of your child or use the linked K5 Math Addition Word Problems or K5 Math Subtraction Word Problems.

Khan Academy Practice: Addition word problems within 10

Khan Academy Practice: Subtraction word problems within 10

ABCYa Online Game: Molly Adds & Subtracts from 10