Illustrative Mathematics

1.OA Maria's Money

Alignment 1: 1.OA.A.1

a. Ali had $9. Maria had $5. How many more dollars did Ali have than Maria?
   Ali had $9. Maria had $5. How many fewer dollars did Maria have than Ali?

b. Ali had $4 more than Maria. Maria had $5. How many dollars did Ali have?
   Maria had $4 less than Ali. Maria had $5. How many dollars did Ali have?

c. Ali had $4 more than Maria. Ali had $9. How many dollars did Maria have?
   Maria had $4 less than Ali. Ali had $9. How many dollars did Maria have?

Commentary:
This task includes problem types that represent the Compare contexts for addition and subtraction (see Table 1 in the glossary of the CCSSM for all all addition and subtraction problem types). There are three types of comparison problems – those with an unknown difference and two known numbers; those with a known difference and a bigger unknown number; and those with a known difference and smaller unknown number. Each of these problem types can be solved using addition or subtraction, although the language in specific problems tends to favor one approach over another.

Please see the K, Counting and Cardinality; K–5, Operations and Algebraic Thinking Progressions Document for in-depth information about issues related to students' learning of these kinds of problems.

Students benefit from encountering one problem type limited to small numbers and to develop strategies for that type of problem before encountering mixed sets of problems and larger numbers that distract the student from the problem itself. Over time they will be able to distinguish between types of problems in mixed sets and apply the appropriate strategy to solve each.

Solution: Classifications included (need solutions written for other three Qs)

This solution is written in teacher language. Students may use objects, pictures, or equations to represent their solutions. While students are expected to add and subtract fluently within 10 at grade 1 (1.OA.6), they are not expected to add and subtract fluently within 20 until second grade; see 2.OA.2.

The solutions show equations with a question mark representing the unknown value, but other symbols are often used. For example, 4 + ? = 9 might also be written 4 + ____ = 9 or 4 + ☐ = 9.

a. **Difference Unknown:**
   Ali had $4 more than Maria. (or)
   Maria had $4 less than Ali.
   Possible equations: 5 + ? = 9; 9 – 5 = ?

b. **Bigger Unknown:** Ali had $9.
   Possible equations: 5 + 4 = ?; ? - 4 = 5

c. **Smaller Unknown:** Maria had $5.
   Possible equations: ? + 4 = 9; 9 – 4 = ?