Illustrative Mathematics

1.OA Sharing Markers

Alignment 1: 1.OA.A.1

- a. Char had 10 markers. She gave 3 to a friend. How many did she have left?
- b. Char had 10 markers. She gave some to a friend. Now she has 7 left. How many markers did she give to her friend?
- c. Char had some markers. She gave 3 to a friend. Then she had 7 left. How many markers did she have to start with?

Commentary:

These tasks types represent the Take From contexts for addition and subtraction (see Table 1 in the glossary of the CCSSM for all all addition and subtraction problem types). This task includes the three different problem types using the Take From context: result unknown, change unknown, and start unknown. Students need experience and practice with all three types.

Result unknown problems (a) and change unknown problems (b) are both fairly easy for most students, since they can be acted out directly. Start unknown problems (c) are the most difficult of the three for most children because they involve thinking about a situation in reverse ("undoing" the action in a situation). Guessing an initial amount then trying it out to see if it works is another possible strategy.

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.

The solutions below are written in teacher language. Students may use objects, pictures, or equations to represent their solutions. While students are expect 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, 10 - ? = 7 might also be written 10 - $\underline{}$ = 10 or 10 - $\underline{}$ = 7.

Solution: Classifications included

a. Result Unknown: Char had 7 markers left.

Possible equation: 10 - 3 = ?

b. Change Unknown: Char gave 3 markers to her friend.

Possible equation: 10 - ? = 7

c. Start Unknown: Char had 10 markers to start with.

Possible equation: ? - 3 = 7



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