

**MC2 Thinking Protocol   
Data Collection & Analysis Tool**

**Date:** Sample Date **District**: Sample District  **School**: \_\_Sample Elementary \_

**Grade:** 5th **Teacher**: Sample Teacher **# Students:** \_\_\_\_\_\_\_24\_\_\_\_\_\_\_\_\_

**Standard(s) or Evidence Statement:** 5.NF.A.1

Use equivalent fractions as a strategy to add and subtract fractions: Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)*

**Enter number of students in the blanks below:**

**Think Alone:**

8 students got the correct response.

**Think with a Partner:**

12 students changed to the correct response.

**Think with the Class:**

20 students turned in the correct response.

students turned in the correct response with accurate computation.

students had the correct operation(s) but had a computation error.

**Student Strategies Used to Solve Problem:**

**Student Strategies Used to Prove Answer was Correct:**

Fraction Bar Models; Algorithm

**Enter misconceptions observed and possible intervention needed to clarify each:**

|  |  |
| --- | --- |
| **Misconception** | **Intervention** |
| * Choosing the right operation * When comparing fractions, draw the same size whole * Providing a model that accurately represents the fractions * Connecting the fraction with the model and the operation | * Review differences in additive situations. When and why do you add or subtract? What operation is used to compare? * Ask students to practice drawing fraction bars with same size wholes to compare fractional parts, Van de Walle, pgs. 295–296 * Ask students to prove their responses with a model of the situation. Emphasize keeping the whole the same size. Offer students different models for fraction concepts, Van de Walle, pgs. 290-296 * Ask students to use language–verbally and in writing–to connect the fraction to the operation and to the model |

**Comments:**