

## Lap Fractions

Ellis, D. W. & Michael F. (2005). The effects of LAP fractions on addition and subtraction of fractions with students with mild disabilities. *Education & Treatment of Children*, 28(1), 11-24.

**This targeted intervention is a mnemonic device to help students remember the steps used to solve addition and subtraction fraction problems.**

### Materials:

- Chart with LAP Steps:

- (1) **Look at the sign and denominator.** Look at the bottom number of your fraction. See if they are the same or different. If they are the same, skip down to "**Pick your fraction type**" and pick Type 1. If they are different, then go to step 2.
- (2) **Ask yourself the question.** "Will the smallest denominator divide into the largest denominator evenly without a number left over?" To help you answer this question, look at the three types of fractions that are listed below (Types 1, 2, and 3). If your answer to this question is "**yes,**" then go down to "**Pick your fraction type**" and pick **Type 2**. If your answer is "**no,**" then go to "**Pick your fraction type**" and pick **Type 3**.
- (3) **Pick your fraction type.**
- (4) **Type 1:  $1/4 + 3/4$**   
Bottom numbers (denominators) are the same. Its sign is addition or subtraction.
- (5) **Type 2:  $1/6 + 1/2$**   
Bottom numbers (denominators) are different and the smallest bottom number **will** divide into the largest bottom number evenly without a number left over. Its sign is addition or subtraction.
- (6) **Type 3:  $2/3 + 3/4$**   
Bottom numbers (denominators) are different and the smallest number **will not** divide into the largest bottom number evenly without a number left over. Its sign is addition or subtraction.
- (7) Identify the denominator.
- (8) Divide the denominator by dividing the smallest denominator into the largest denominator.

- Addition and/or subtraction fraction problems

Steps:

1. The teacher introduces the LAP chart to the student(s) and models how to use to use the chart.
2. The student(s) are taught to identify the denominator in a fraction problem.
3. The student(s) are taught to determine if the smallest denominator would divide into the largest denominator without a remainder. The student(s) then practice dividing the smallest denominator into the largest.
4. The student(s) practice identifying Type 1, 2, and 3 fraction problems.
5. The student(s) practice solving Type 1 fraction problems.
6. The student(s) practice solving Type 2 fraction problems.
7. The student(s) practice solving Type 3 fraction problems.
8. Under the teacher's direction, the student(s) receive guided practice using the LAP Chart with a variety of Type 1, 2, and 3 fraction problems.
9. The student(s) solve fraction problems using the LAP chart independently.