



Using the LAP strategy to Teach Addition and Subtraction of Fractions. Lesson 3

Objective: To teach students to understand how to get a common denominator.

Setting and Materials:

Settings: Special Education Resource Classroom

Materials:

- Notecards of Fraction problems (30) (2 sets of a deck for the games)
- Paper
- Pencil

Content Taught

Teach students to use a mnemonic strategy to add and subtract fractions.

Teaching Procedures

1. Pair students by ability level for this lesson.
2. Teach the students how to determine if the smallest denominator will divide into the largest denominator without a remainder and what to do if they will not. These are referred to as Type III Fractions.
3. Problem: $\frac{3}{5} + \frac{1}{4}$
 - a. Explain that the smallest number on the bottom will not divide evenly into the largest number on the problem.
 - b. Instruct the students to draw two new fraction lines under the problem $\frac{3}{5} + \frac{1}{4} \frac{_}{_} + \frac{_}{_}$
 - c. Instruct them to multiply their two bottom numbers. $3 + 1 \ 5 \times 4$
 - d. Instruct them to put their new bottom numbers under the fraction lines they drew. $\frac{_}{20} + \frac{_}{20}$
 - e. Instruct them to take their first original top number (3) and multiply it by the original opposite bottom number (4) 3×4
 - f. Instruct the students to place this number as the first new top number in their fractions. $\frac{12}{20} + \frac{_}{20}$
 - g. Instruct the students to take their second original top number (1) and multiply it by the original opposite bottom number (5) 1×5
 - h. Instruct the students to place this number as the second new top number in their fractions. $\frac{12}{20} + \frac{5}{20}$
 - i. Instruct the students to add their new top numbers $12 + 5 = 17$ $\frac{17}{20} + \frac{5}{20}$

4. Have students practice in pairs solving type III fractions using teacher made activities including Fraction Football and Fraction Basketball.
5. Fraction Football: designed for two players
 - i. A student draws a card from a deck of 30 different fraction problems.
 - ii. The student finds a common denominator using the steps learned during instruction.
 1. If correct, the student picks a card from the yardage deck (gives them positive yardage)
 - iii. If incorrect, the student loses a down.
 - iv. The student with the most points at the end of the game wins.
6. Fraction Basketball: designed for two players
 - i. A student draws a card from a deck of 30 different fraction problems.
 - ii. The student finds a common denominator using the steps learned during instruction.
 - iii. If correct, the student gets two points.
 - iv. If incorrect, the student does not get any points.
 - v. The student with the most points at the end of the game wins.

Evaluation

Students were given an 18-item LAP fractions test to assess their learning.

Lesson Plan Based on:

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

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