

Must Be Alike

Purpose

Students will add and subtract fractions (including mixed numbers) with different denominators.

Materials

For the teacher: overhead projector, overhead markers, set of transparent fraction bars

For each pair of students: two number cubes or smaller wooden cubes, one marked $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{3}$, $\frac{3}{4}$, $\frac{1}{5}$, and the other marked 1, 2, 3, 4, 5, 6; 3 or 4 copies of Black Line Master (BLM) *Race to 25*; paper; pencils

Activity

A. Pre-Activity Preparation

For each pair of students, label one number cube " $\frac{1}{2}$," " $\frac{1}{3}$," " $\frac{1}{4}$," " $\frac{2}{3}$," " $\frac{3}{4}$," and " $\frac{1}{5}$." Label the other number cube "1," "2," "3," "4," "5," and "6."

B. Introduction

1. Review with students the need for common denominators in adding and subtracting of fractions.
2. Using fraction bars, demonstrate adding and subtracting mixed numbers containing fractions with different denominators. Be sure to use examples where regrouping is necessary.

C. Partner Activity

1. Distribute number cubes and the BLM *Race to 25*.
2. Model playing the game *Race to 25*:
 - Roll both number cubes, using the whole number and the fraction to make a mixed number.
 - Record the first mixed number in the first column of the BLM (First Number, Round 1).
 - Roll a second time and record this mixed number on the BLM (Second Number, Round 1) to add to the first.
 - Add the two numbers on the overhead, showing work, and record the answer in the Total column.
3. To start the game, have one player in each pair proceed as above, performing the addition on separate paper.

(continued)

EXTENDING THE ACTIVITY



Have students bring in recipes from home. Make copies of the recipes and ask questions such as: "How much cinnamon would you need to make an apple pie, a spice cake, and snickerdoodle cookies?"

MEETING INDIVIDUAL NEEDS



Give students who are having difficulties sets of fraction bars so that they can model the additions and subtractions.

Standards Link
5.1.5




Activity (continued)

4. Have each partner use the right side of the BLM to record two numbers and his/her total.
5. For the second (and later) rounds, have each student roll the number cubes and add to his/her previous total.
6. Continue the game for four rounds. Tell students that the partner closest to 25 without going over is the winner of that round.
7. Tell students that for subtraction practice they should start with 25, play four rounds, and the partner closest to 0 is the winner.
8. When students have completed the activity, collect the BLM and work paper to check understanding.

Questions for Review

Basic Processes

During the activity, ask students the following questions:

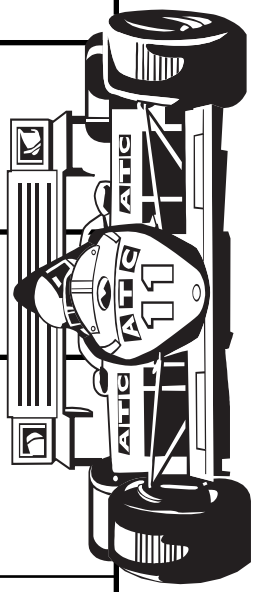
-  How did you add the last two mixed numbers you rolled?
 -  Show me how you added the fraction parts.
 -  What did you do with the whole numbers?
-

Name: _____

Race to 25

| | First Number | Second Number | Total |
|---------|--------------|---------------|-------|
| Round 1 | | | |
| Round 2 | | | |
| Round 3 | | | |
| Round 4 | | | |
| Total | | | |

| | First Number | Second Number | Total |
|---------|--------------|---------------|-------|
| Round 1 | | | |
| Round 2 | | | |
| Round 3 | | | |
| Round 4 | | | |
| Total | | | |



Race to 25

Teacher Directions

Distribute three or four copies of the BLM *Race to 25* to each pair of students. Have students use the BLM to record their numbers and totals for each round of the activity.

Answer Key

Not applicable.