Hind Ali

Mathematical Topic: Fractions

General Purpose:

* Adding fractions and decimals.

Overview:

* Students will use common fractions, decimals, and benchmarks in a game context to estimate the sum of chosen fractions and determine if the sum is closer to 0, 1, or 2.
* Learning Objective/Common Core State Standard:

CCSS.MATH.CONTENT.8.EE.A.1

Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, 32 × 3-5 = 3-3 = 1/33 = 1/27.

* Grade level(s): Eight Grade
* Background knowledge required of students:
* Understand how to add common fractions, using fraction strips or other manipulatives.
* Understand how to add decimals.

Time: 20 minutes.

Materials needed:

* A copy of the handout “Which Is Closer? Game Cards – Fractions” for each group of students
* A copy of the handout “Which Is Closer? Game Cards –Decimals” for each group of students
* A copy of the handout “Which Is Closer? Sum Cards” for each student
* Scissors
* Fraction strips or hundredths strips and hundredths grids
* Calculators

Type of activity: Game Card

Why I picked this activity:

* This activity will help students gain knowledge of common fractions, and how to represent them as parts of a whole unit

Follow-up activities/extensions:

* Have the students play the game with the decimal Game Cards.

Weaknesses/limitations of activity:

* The cards need to be cut in advance.

Procedure:

* Divide the students into groups of two to four players. Give each player a “Which Is Closer? Sum Cards” handout and each group a “Which Is Closer? Game Cards – Fractions” handouts.
* Ask the students to cut out all their cards. Assign one player per group the task of calculating the sums for the game.
* Instruct all players to hold their personal Sum Cards in their hands and to place the group Game Cards face down in a pile in the center of the table. Model the following rules of the game for one round to make sure the students understand the play:
1. The first player draws two cards from the Game Cards pile and turns them up in the center of the table.
2. Each player estimates the sum of the two fractions shown on the Game Cards (using 116 fraction strips if necessary), and decides if the sum is closer to 0, 1, or 2.
3. Each student then places the corresponding Sum Card (0, 1, or 2) face up on the table.
4. After each player has placed his/her Sum Card on the table, the assigned player uses the calculator or some other method to determine the sum.
5. The first player who put the correct Sum Card down collects the two Game Cards. If there is a tie, each player gets one Game Card. (If necessary, draw cards from the pile.)
6. Each player who put down the wrong Sum Card must return one of his/her Game Cards to the bottom of the pile if he/she has any Game Cards.
7. Play continues with the winner of the round turning over two more Game Cards from the pile.
8. When all the Game Cards have been used, or there is only one left, the game ends. The winner is the player with the most Game Cards.

Source:

Book: Thinking Rationally about Fractions, Decimals, and Percent