



FLEXIBLE DECOMPOSITION

Name: *Five Ways, Most Ways*

Type: *Game*

About the Game: To develop skill with decomposition, students need opportunities to practice decomposing numbers in a variety of ways. *Five Ways, Most Ways* is a whole-class game to do just that. This game provides opportunities for students to see others' ideas about decomposing.

Materials: No materials are needed for this game.

- Directions:**
1. Post a number on the board such as -35 , 5.7 , or $9\frac{1}{3}$.
 2. Give students time to independently decompose the posted number.
 3. Place students in teams of three, four, or five.
 4. Students compare their decompositions and make a list of unique decompositions.
 5. Teams earn a point for each unique decomposition. A unique decomposition is a decomposition that only one student records. In the example below, Theo is the only player with -75 and 40 , so that would earn a point.
 6. The team with the most points wins the game.

In this example, students were prompted to decompose -35 . Pan's example is on the left, Theo's example is in the middle, and Lora's is on the right. These three were on the same team. They compared their ideas and found that there were two unique decompositions (-75 and 40 , -50 and 15) or combinations that they made that no one else on their team made. They earned two points.

Pan's List	Theo's list	Lora's list
-30 and -5	-30 and -5	-31 and -4
-31 and -4	-20 and -15	-30 and -5
-34 and -1	-40 and 5	25 and -10
-20 and -15	-75 and 40	-40 and 5
-10 and -25	-50 and 15	-1 and -34