

Decimal Dilemma

Overview

This is an estimation game for two players, designed to enhance students' estimation skills with decimal operations. It is a particularly effective way to provoke students' curiosity about why they get counter-intuitive results when they multiply and divide by numbers less than 1. This creates powerful teaching opportunities related to multiplication and division by fractions as well as decimals.

It is an activity for more advanced numeracy and mathematics students who have an understanding of the meaning of fractions and decimals. It can usefully follow the earlier estimation game, Target 100.

Skills and Knowledge

- Estimation of decimal calculations
- Multiplication by decimals
- Division by decimals
- Use of a calculator

Preparation and Materials

- Calculators (1 per student)
- Photocopy Activity Sheet: Decimal Dilemma (1 per pair of students)
- Small counters, coins or beans (1 per pair of students)
- A handful of toothpicks or matches or something easy to break in half (for demonstration)
- A handful of beans, sweets or counters (for demonstration)

Suggested Procedure

Arrange students in pairs ready to play and make sure each person has a calculator.

Hand out a copy of the Activity Sheet and one counter to each pair of students.

Introducing the game

Explain:

- *The aim of the game is to have the largest number on your calculator at the end.*
- *You will both be moving the same counter, taking turns to do a calculation as you move it around the board.*



Even when the game has served its purpose of providing this teaching moment, it is still a challenging activity for students to use several times over so that they reinforce the learning and practice their estimation skills. It is useful as a focus activity to start a lesson or a break from individual practice during a session.

Variation

To provide a different challenge you could ask students to aim for the smallest number (number closest to zero) rather than the largest. Negatives can be ignored for the purpose of this game.

Sample only
Print not available



