



## Adding and Subtracting with Decimals Teaching Ideas

**Learning Objective:** To use column addition and subtraction for decimals.

- Success Criteria:**
- To use column addition for decimals.
  - To use column subtraction for decimals.
  - To solve problems using column addition and subtraction.

**Context:** This is the seventh lesson on the four operations. The first four focus on positive integers, this is one of the six lessons that look at decimals. A later lesson covers negative numbers.

### Starter

#### Converting Decimals to Fractions

Ask students to convert decimals into fractions by considering their place value. This acts as useful revision as well as offering students another way to visualise the given numbers.

### Main Activities

#### Using Column Addition for Decimals

Point out that when we use column addition for decimals, we need to line up digits with the same place value, just as we do when working with whole numbers. This is automatically achieved if we line up the decimal points. Demonstrate the method, emphasising the important points: we must work from right to left; use carrying where necessary; and copy the decimal point down into the answer space.

Explain that filling up gaps with zeroes can be helpful. Reinforce the process for finding a decimal point in a number where it is not initially apparent.

#### Using Column Subtraction for Decimals

Explain that the method for using column subtraction with decimals is very similar. Remind students of the process for borrowing and ensure that they know that they will usually need to fill gaps with zeroes when subtracting. Work through the example given, which requires students to position the decimal point in the appropriate place in a whole number.

#### Activity Sheet

Have students complete the activity sheet independently.

#### Subtraction Board Game

Pupils play in pairs. Cut out and place the pile of cards face down, roll the dice and move accordingly. If the pupils land on a space with a Q on it, they must answer the question on the top card then return it to the bottom of the pile. If they get the answer correct, they move on three spaces, otherwise back three spaces. The winner is the player to reach the end first.

### Plenary

Have students work out the answers to the given calculations then order them from smallest to largest. This can be done on whiteboards.