

# Lesson Plan Adding & Subtracting Fractions

Secondary Courseware Skill Level 4

## Lesson (PLATO):

Curriculum: Foundational Math

Course: Adding and Subtracting Fractions

Module: Adding and Subtracting Fractions: Like Denominators

## Objective/Skill Activity (PLATO):

Objective: The learner will add or subtract two fractions with like denominators.

## Content Standard (PLATO/State):

Standard: 6.M.1.2.2

Goal: Add, subtract, multiply, and divide whole numbers, decimals, and simple fractions (including unlike denominators).

## Anticipatory Set (Teacher):

Activity: Teacher will utilize the PLATO Tutorial as the introduction to this lesson

Materials: Computer, Projector, PLATO Courseware, Offline Activity, Smart Tools if available (CPS Chalkboard)

## Instructional Strategies (Teacher):

- Go through the tutorial as a whole group introduction to this objective
- Check the students understanding of the lesson by utilizing the PLATO Courseware and at the Practice/Application level as a whole group activity.
- Encourage collaborative explorations and discussions using the Math Tools.
- Project the courseware on a screen for classroom demonstrations and discussions.

## Classroom Activities (setting, schedule, time allotment, student guided, and independent practice):

- Whole group interaction with the students by utilizing the PLATO courseware and the learning tools provided with in the courseware.
- Use the courseware as a vehicle for individual support within a problem-solving classroom.
- Encourage peer-tutoring by assigning pairs of learners to work through a tutorial and practice together.

## Extension Activity (Teacher):

- Offline activity will be provided as a follow-up activity
- Develop Journal prompts that encourage the learner to further extend their mathematical knowledge and make connections
- Assign individual lessons to small groups; have each group teach the lesson content to the whole group

## Closure Activity (Teacher):

Review the materials presented through the PLATO Courseware and check the students understanding of the concepts taught

**Assessment Strategy (PLATO/Teacher):**

- PLATO Mastery test will be completed by each student and passed with a score of 80% or better.
- Use course level assessments as pre-tests to prescribe modules that target skill gaps.
- Use mastery tests as pre-tests to allow learners to “test out” of particular modules.
- Use printed-out journal exercises and offline activities as part of a portfolio-based assessment plan.

**Follow-up/Comments:**

Students not passing the mastery test will be required to repeat the tutorial and supporting materials before taking the test again

**Lesson Plan Adding & Subtracting Fractions**

Secondary Courseware Skill Level 5

**Lesson (PLATO):**

Curriculum: Foundational Math

Course: Adding and Subtracting Fractions

Module: Adding and Subtracting Fractions: Unlike Denominators

**Objective/Skill Activity (PLATO):**

Objective: The learner will add or subtract two fractions with unlike denominators, such that the sum or difference is  $< 1$ .

**Content Standard (PLATO/State):**

Standard: 6.M.1.2.2

Goal: Add, subtract, multiply, and divide whole numbers, decimals, and simple fractions (including unlike denominators).

**Anticipatory Set (Teacher):**

Activity: Teacher will utilize the PLATO Tutorial as the introduction to this lesson

Materials: Computer, Projector, PLATO Courseware, Offline Activity, Smart Tools if available (CPS Chalkboard)

**Instructional Strategies (Teacher):**

- Go through the tutorial as a whole group introduction to this objective
- Check the students understanding of the lesson by utilizing the PLATO Courseware and at the Practice/Application level as a whole group activity.
- Encourage collaborative explorations and discussions using the Math Tools.
- Project the courseware on a screen for classroom demonstrations and discussions.

**Classroom Activities (setting, schedule, time allotment, student guided, and independent practice):**

- Whole group interaction with the students by utilizing the PLATO courseware and the learning tools provided with in the courseware.
- Use the courseware as a vehicle for individual support within a problem-solving classroom.
- Encourage peer-tutoring by assigning pairs of learners to work through a tutorial and practice together.

**Extension Activity (Teacher):**

- Offline activity will be provided as a follow-up activity
- Develop Journal prompts that encourage the learner to further extend their mathematical knowledge and make connections
- Assign individual lessons to small groups; have each group teach the lesson content to the whole group

**Closure Activity (Teacher):**

Review the materials presented through the PLATO Courseware and check the students understanding of the concepts taught

**Assessment Strategy (PLATO/Teacher):**

- PLATO Mastery test will be completed by each student and passed with a score of 80% or better.
- Use course level assessments as pre-tests to prescribe modules that target skill gaps.
- Use mastery tests as pre-tests to allow learners to “test out” of particular modules.
- Use printed-out journal exercises and offline activities as part of a portfolio-based assessment plan.

**Follow-up/Comments:**

Students not passing the mastery test will be required to repeat the tutorial and supporting materials before taking the test again

**Lesson Plan Adding & Subtracting Fractions**

Secondary Courseware Skill Level 5

**Lesson (PLATO):**

Curriculum: Foundational Math

Course: Adding and Subtracting Fractions

Module: Adding Mixed Numbers

**Objective/Skill Activity (PLATO):**

Objective: The learner will find the sum of two mixed numbers or the sum of a mixed number and a whole number and express it in simplest form.

**Content Standard (PLATO/State):**

Standard: 6.M.1.2.2

Goal: Add, subtract, multiply, and divide whole numbers, decimals, and simple fractions (including unlike denominators).

**Anticipatory Set (Teacher):**

Activity: Teacher will utilize the PLATO Tutorial as the introduction to this lesson

Materials: Computer, Projector, PLATO Courseware, Offline Activity, Smart Tools if available (CPS Chalkboard)

### Instructional Strategies (Teacher):

- Go through the tutorial as a whole group introduction to this objective
- Check the students understanding of the lesson by utilizing the PLATO Courseware and at the Practice/Application level as a whole group activity.
- Encourage collaborative explorations and discussions using the Math Tools.
- Project the courseware on a screen for classroom demonstrations and discussions.

### Classroom Activities (setting, schedule, time allotment, student guided, and independent practice):

- Whole group interaction with the students by utilizing the PLATO courseware and the learning tools provided with in the courseware.
- Use the courseware as a vehicle for individual support within a problem-solving classroom.
- Encourage peer-tutoring by assigning pairs of learners to work through a tutorial and practice together.

### Extension Activity (Teacher):

- Offline activity will be provided as a follow-up activity
- Develop Journal prompts that encourage the learner to further extend their mathematical knowledge and make connections
- Assign individual lessons to small groups; have each group teach the lesson content to the whole group

### Closure Activity (Teacher):

Review the materials presented through the PLATO Courseware and check the students understanding of the concepts taught

### Assessment Strategy (PLATO/Teacher):

- PLATO Mastery test will be completed by each student and passed with a score of 80% or better.
- Use course level assessments as pre-tests to prescribe modules that target skill gaps.
- Use mastery tests as pre-tests to allow learners to “test out” of particular modules.
- Use printed-out journal exercises and offline activities as part of a portfolio-based assessment plan.

### Follow-up/Comments:

Students not passing the mastery test will be required to repeat the tutorial and supporting materials before taking the test again

## **Lesson Plan Adding & Subtracting Fractions**

Secondary Courseware Skill Level 5

### Lesson (PLATO):

Curriculum: Foundational Math

Course: Adding and Subtracting Fractions

Module: Subtracting Mixed Numbers: Like Denominators

### Objective/Skill Activity (PLATO):

Objective: Given a mixed number and a whole number or two mixed numbers in which the fractions have like denominators, the learner will find the difference and express it in simplest form.

**Content Standard (PLATO/State):**

**Standard: 6.M.1.2.2**

**Goal: Add, subtract, multiply, and divide whole numbers, decimals, and simple fractions (including unlike denominators).**

**Anticipatory Set (Teacher):**

**Activity: Teacher will utilize the PLATO Tutorial as the introduction to this lesson**

**Materials: Computer, Projector, PLATO Courseware, Offline Activity, Smart Tools if available (CPS Chalkboard)**

**Instructional Strategies (Teacher):**

- Go through the tutorial as a whole group introduction to this objective
- Check the students understanding of the lesson by utilizing the PLATO Courseware and at the Practice/Application level as a whole group activity.
- Encourage collaborative explorations and discussions using the Math Tools.
- Project the courseware on a screen for classroom demonstrations and discussions.

**Classroom Activities (setting, schedule, time allotment, student guided, and independent practice):**

- Whole group interaction with the students by utilizing the PLATO courseware and the learning tools provided with in the courseware.
- Use the courseware as a vehicle for individual support within a problem-solving classroom.
- Encourage peer-tutoring by assigning pairs of learners to work through a tutorial and practice together.

**Extension Activity (Teacher):**

- Offline activity will be provided as a follow-up activity
- Develop Journal prompts that encourage the learner to further extend their mathematical knowledge and make connections
- Assign individual lessons to small groups; have each group teach the lesson content to the whole group

**Closure Activity (Teacher):**

**Review the materials presented through the PLATO Courseware and check the students understanding of the concepts taught**

**Assessment Strategy (PLATO/Teacher):**

- PLATO Mastery test will be completed by each student and passed with a score of 80% or better.
- Use course level assessments as pre-tests to prescribe modules that target skill gaps.
- Use mastery tests as pre-tests to allow learners to “test out” of particular modules.
- Use printed-out journal exercises and offline activities as part of a portfolio-based assessment plan.

**Follow-up/Comments:**

**Students not passing the mastery test will be required to repeat the tutorial and supporting materials before taking the test again**

# Fractions

## Lesson (PLATO):

Curriculum: Foundational Math

Course: Adding and Subtracting Fractions

Module: Subtracting Mixed Numbers: Unlike Denominators

## Objective/Skill Activity (PLATO):

Objective: Given two mixed numbers in which the fractions have unlike denominators, the learner will find the difference (with or without regrouping) and express it in simplest form.

## Content Standard (PLATO/State):

Standard: 6.M.1.2.2

Goal: Add, subtract, multiply, and divide whole numbers, decimals, and simple fractions (including unlike denominators).

## Anticipatory Set (Teacher):

Activity: Teacher will utilize the PLATO Tutorial as the introduction to this lesson

Materials: Computer, Projector, PLATO Courseware, Offline Activity, Smart Tools if available (CPS Chalkboard)

## Instructional Strategies (Teacher):

- Go through the tutorial as a whole group introduction to this objective
- Check the students understanding of the lesson by utilizing the PLATO Courseware and at the Practice/Application level as a whole group activity.
- Encourage collaborative explorations and discussions using the Math Tools.
- Project the courseware on a screen for classroom demonstrations and discussions.

## Classroom Activities (setting, schedule, time allotment, student guided, and independent practice):

- Whole group interaction with the students by utilizing the PLATO courseware and the learning tools provided with in the courseware.
- Use the courseware as a vehicle for individual support within a problem-solving classroom.
- Encourage peer-tutoring by assigning pairs of learners to work through a tutorial and practice together.

## Extension Activity (Teacher):

- Offline activity will be provided as a follow-up activity
- Develop Journal prompts that encourage the learner to further extend their mathematical knowledge and make connections
- Assign individual lessons to small groups; have each group teach the lesson content to the whole group

## Closure Activity (Teacher):

Review the materials presented through the PLATO Courseware and check the students understanding of the concepts taught

## Assessment Strategy (PLATO/Teacher):

- PLATO Mastery test will be completed by each student and passed with a score of 80% or better.
- Use course level assessments as pre-tests to prescribe modules that target skill gaps.
- Use mastery tests as pre-tests to allow learners to “test out” of particular modules.

- Use printed-out journal exercises and offline activities as part of a portfolio-based assessment plan.

**Follow-up/Comments:**

**Students not passing the mastery test will be required to repeat the tutorial and supporting materials before taking the test again**