

SUBTRACTION OF 3-DIGIT NUMBERS (WITH AND WITHOUT REGROUPING)

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Subject

Mathematics

Prepared By

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Grade Level

2

Overview

This lesson plan covers teaching content for;

1. Subtraction of 3-digit numbers with regrouping
2. Subtraction of 3-digit numbers without regrouping

Objectives

Students should be able to;

1. Subtract three-digit numbers that require regrouping.
2. Subtract three-digit numbers without regrouping.

Activity Starter/Instruction

Subtraction of 3-digit numbers without regrouping

1. Begin by telling students you are going to share a subtraction story.
2. Ask students what they think a "subtraction story" might be. Take a few answers.
3. Explain that a subtraction story is a real-world situation where subtraction is used to solve a problem or come up with a solution
4. Tell students the following subtraction story: Ade had 384 leaves in his backyard. He raked 142 leaves. How many leaves were left in the backyard?
5. Write on the board $384 - 142 = \underline{\quad}$. Explain that you'll need to figure out how many leaves were left when 142 is subtracted from 384.

Activity Starter/Instruction

Subtraction of 3-digit numbers with regrouping

1. Explain that today we are going to learn how to regroup three-digit subtraction problems.
2. Remind students what subtraction is: "taking away" or subtracting two or more numbers to find the difference.
3. Introduce the concept of regrouping as changing groups of ones, tens, or hundreds into another value (e.g., changing 1 ten to 10 ones).
4. Discuss with students that sometimes when we subtract we have to regroup.

Materials Required

- base-ten blocks
- number cards
- Subtracting Using Base-Ten Blocks Worksheet
- Class set of the Place Value Blocks worksheet
- Place value blocks
- Subtraction Strategy Posters

Additional Resources

- <https://www.education.com/lesson-plan/do>
- <http://www.cpalms.org/Public/PreviewResource>
- <https://www.education.com/lesson-plan/su>
- http://www.teach-nology.com/lessons/ltn_pln_view_lessons.pl
- [20](#)

Additional Notes

Teacher Practice

Day 1, Lesson 1-25 Mins

Subtraction of 3-digit numbers without regrouping

1. Show students a sample three-digit math problem written vertically ($468 - 357 =$) on the board.
2. Tell the students that today we are going to take what we know about place value, how to break numbers apart into expanded form, and addition and use that knowledge to solve this three-digit subtraction problem.
3. Tell students that the strategy we will be using to solve this problem is called expanded form subtraction.
4. Write a three-digit number "468" on the board and have the students demonstrate how to represent that number using base ten blocks. (4 hundreds, 6 tens, 8 ones) and in expanded form ($400 + 60 + 8$)
5. Ask a student to represent the second number with base ten blocks. Again, have the students write the second addend in expanded form ($300 + 50 + 7$) and write it directly below $400 + 60 + 8$. Emphasize the importance of lining up the place values, vertically.
6. Tell the students that we will start with the ones place and work our way to the largest place in the problem.
7. Ask students to attempt to solve each place value separately, writing the difference to each place out in expanded form (Difference = $100 + 10 + 1$).

Guided Practice

Day 2, Lesson 1-25 Mins

Subtraction of 3-digit numbers with regrouping

1. Show students a problem that requires regrouping in the tens place ($428 - 186 =$). Demonstrate regrouping this example, using base ten blocks and discuss why you have to regroup.
"What is the value of these 2 in 422?"
Answer: 20
"What is the value of 8 in 186?" Answer: 80
"Can I take 80 away, if I have 20?" No
"Who can show me how I can regroup 422, so that I have enough tens to take away 80?"
3. Using base ten blocks, have a student demonstrate regrouping 1 hundred from 422, so that there are 3 hundreds (flats), 12 tens (rods) and 2 ones.
4. Have a student demonstrate how we represent this in the written problem. (In the hundreds place, cross out the 4 and place a 3. In the tens place, Cross out the 2 and place a 12.) Emphasize that 3 hundreds and 12 tens ($300 + 120$) is the same as 4 hundreds and 2 tens ($400 + 20$)
5. Then have a student demonstrate subtracting 8 tens (rods) from the base ten block representation of 422 (3 hundreds, 12

Assessment Activity

1. At the end of each part of the lesson, each student will be given a worksheet with problems to solve using the strategies that were taught that day. The students will solve those problems independently and turn to the teacher for review.

8. Now, tell the student to try out the example starter (384 - 142)

9. Tell the students that just like with addition now we have to snap the problem back together to find the difference. (Ensure students rewrite the problem vertically to make it easier for them to add.) Now we have found the difference to this problem.

10. Start with a subtraction problem that does not require regrouping and have students work with those problems until they are comfortable with the strategy.

tens, and 2 ones) Answer: 3 hundreds, 4 tens and 2 ones.

6. Demonstrate how this is represented in the written problem.

7. Complete the problem by having a student remove 6 ones from 348, in the base ten blocks representation, as well as in the written form.

$$428 - 186 = 242$$

8. Let students practice determining if they need to regroup or not until you feel that they grasp this concept.

Summary

1. Have students share their strategies for solving the problems on the worksheet.