

Adding and Subtracting 3-Digit Numbers

Adapted from Contexts for Learning Mathematics

3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

These place value mini-lessons are designed to develop efficiency with computation through a variety of mental math strategies. They can be used at any time and should last for ten to fifteen minutes.

Task 1A: Adding 100

- Have a child choose a number between 10 and 100 and the teacher will write it on chart paper.
- Go around the class and have different students add 100 to the previous number.
- Record their answers on the chart (example – 27, 127, 227, 327, 427, etc).
- Discuss the pattern. What is changing? *The number of hundreds increases by 1. The tens and ones stay the same.* Will this happen every time?
- Discuss how this pattern can continue past 1000, for example: 727, 827, 927, 1027. Establish that 1 thousand has 10 hundreds.
- Variations:
 - Have students start with a different number but continue to add 100. Note the pattern: *The hundreds always increase by 1. The tens and ones stay the same.*
 - Have students add a different multiple of 100 such as 200. (Example: 27, 227, 427, 627). Discuss the results with a focus on the increasing hundreds pattern.

Task 1B: Subtracting 100

- Have a child choose a number between 500 and 1000. Write it on chart paper.
- Go around the class having each child subtract 100 from the previous number. (For example: 1050, 950, etc.)
- Record the results and discuss the pattern. *The hundreds decrease by 1. The tens and ones stay the same. Ask, will this always happen?*
- Variations:
 - Have students start with a different number but continue to subtract 100. Note the pattern.
 - Have students subtract a different multiple of 100 such as 200. Discuss the pattern.

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Task 2A: Adding 101

- Have a child choose a number between 10 and 100 and the teacher will write it on chart paper.
- Go around the class and have different students add 101 to the previous number.
- Record their answers on the chart (example – 22, 123, 224, 325, 426, etc).
- Discuss the pattern. What is changing?
- Variations:
 - Have students start with a different number but continue to add 101. Note the pattern.
 - Have students add a different hundred plus 1 such 201 (Example: 27, 228, 429, 630). Discuss the results with a focus on the increasing hundreds pattern.

Task 2B: Subtracting 101

- Have a child choose a number between 500 and 1000. Write it on chart paper.
- Go around the class having each child subtract 101 from the previous number. (For example:, 950, 849, 748, etc.)
- Record the results and discuss the pattern. The hundreds decrease by 1 and the ones decrease by 1 each time.
- Variations:
 - Have students start with a different number but continue to subtract 101. Note the pattern.
 - Have students subtract a different 100 plus 1 such as 201. Discuss the pattern.