

Just In Time Quick Check
Standard of Learning (SOL) 3.3b

Strand: Computation and Estimation

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The student will create and solve single-step and multistep practical problems involving sums or differences of two whole numbers, each 9,999 or less.

Grade Level Skills:

- Apply strategies, including place value and the properties of addition, to add two whole numbers with sums to 9,999.
- Apply strategies, including place value and the properties of addition, to subtract two whole numbers, each 9,999 or less.
- Use inverse relationships between addition and subtraction facts to solve practical problems.
- Create and solve single-step and multistep practical problems involving the sum or difference of two whole numbers, each 9,999 or less.

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Just in Time Quick Check Teacher Notes

Supporting Resources:

- VDOE Word Wall Cards: Grade 3 ([Word](#)) | ([PDF](#))
 - Addition
 - Subtraction
 - Regroup/Rename
 - Place Value Position
 - Equation: Number Sentence
 - Related Facts: Addition/Subtraction
- VDOE Rich Mathematical Tasks
 - [Money in the Piggy Bank Task Template](#) (Word) | ([PDF Version](#))
 - [Money in the Piggy Bank Student Version of Task](#) (Word) | ([PDF Version](#))
 - [Money in the Piggy Bank Anchor Papers](#) (Word) | ([PDF Version](#))
 - [Money in the Piggy Bank Anchor Papers Scoring Rationales](#) (Word) | ([PDF Version](#))
- VDOE Instructional Videos for Teachers
 - [Strategies for Learning Basic Facts \(grades K-3\)](#)

Supporting and Prerequisite SOL: [3.3a](#), [3.17](#), [2.5a](#), [2.6a](#), [2.6b](#), [2.6c](#), [1.6](#)

SOL 3.3b - Just in Time Quick Check

1. Ben had 414 trading cards. Alex gave him 319 more trading cards. How many trading cards does Ben have altogether?
2. Javon had 214 marbles. Dacari gave him some more marbles. Now Javon has 302 marbles. How many marbles did Dacari give to Javon?
3. There are 2,035 students at Richmond High School. There are 942 students who are boys. The rest of the students are girls. How many girls are at Richmond High School?
4. The Virginia Heights library has 847 more books than the Round Hill library. The Round Hill library has 3,608 books. How many books do these libraries have altogether?

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Common Errors/Misconceptions and their Possible Indications

1. Ben had 414 trading cards. Alex gave him 319 more trading cards. How many trading cards does Ben have altogether?

Students who use partial sums as a strategy ($400 + 300 = 700$, $10 + 10 = 20$, $4 + 9 = 13$, $700 + 20 + 13 = 733$) may have difficulty adding the sums together or keeping track of what has been combined. Students who use the traditional algorithm may arrive at a total of 7,213 (record the sum of 9 and 4 as 13, but write both digits in the ones place) or 751 (find $9 + 4 = 13$ but write 1 in the ones place and “carry” the 3 ones to the tens place). In both instances, students may benefit from using base-ten blocks or other models to illustrate the regrouping concept and make sense of a reasonable answer. Students may benefit from opportunities to share and explore strategies for multi-digit addition with their classmates during number talks. These talks can help students who may be relying on procedural knowledge to build conceptual understanding, while also developing flexible strategies for computation.

2. Javon had 214 marbles. Dacari gave him some more marbles. Now Javon has 302 marbles. How many marbles did Dacari give to Javon?

The most common error associated with this type of task is students who answer 516 as the total of the given numbers, indicating they are likely relying on a “key word” strategy and adding based on “more” from the context of the problem. These students need instructional experiences that focus on making sense of practical problems and will likely benefit from further exposure to the various problem types described in the Grade 3 Curriculum Framework.

Students who perceive this as a missing addend (or join with the change unknown) problem may write the equation $214 + ? = 302$ but still have difficulty finding a solution. Representing the situation with this equation demonstrates an understanding of the full context of the problem, but students may have difficulty keeping track of the parts of the missing addend. For example, students may think $214 + 100$ will be close to 302, but they may not know what to do next.

Students who subtract using the traditional algorithm may struggle with regrouping in the tens place, or they may “flip” the digits in order to subtract (i.e., subtract $4 - 2$ in the ones place, $1 - 0$ in the tens place, and $3 - 2$ in the hundreds place). These students would benefit with further practice using concrete materials that are proportional and that can be regrouped to connect place value meaning to the algorithm.

For each of these errors, students would benefit from more exposure to other computation strategies shared by their peers and opportunities to make sense of, and to try out, these strategies in new problem situations.

3. There are 2,035 students at Richmond High School. There are 942 students who are boys. The rest of the students are girls. How many girls are at Richmond High School?

Students who subtract using the traditional algorithm may have difficulty regrouping, especially across the hundreds in 2,035. Having students solve a similar problem that does not require regrouping to this extent may provide additional information about their skill with this strategy. Students who have difficulty with regrouping using the traditional algorithm would benefit from more experiences with student-invented strategies for problem solving that are shared, explained, and justified during classroom discussions. These students would also benefit from using models (i.e., base-ten blocks or diagrams) to represent and build greater conceptual understanding for the regrouping procedure.

Students who add the numbers instead of subtracting will benefit from more experience with the various problem types described in the Grade 3 Curriculum Framework.

4. The Virginia Heights library has 847 more books than the Round Hill library. The Round Hill library has 3,608 books. How many books do these libraries have altogether?

The most common error when solving a multistep problem is solving only one portion of the problem. In this problem, students may find $847 + 3,608 = 4,455$ but not realize this is the number of books at the Virginia Heights library and not the total number of books from both libraries. These students would benefit from additional experiences solving multistep practical problems.