



3.CA.2 Solve real-world problems involving addition and subtraction of multi-digit whole numbers (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem). (E)

Reporting Category: Computation and Algebraic Thinking

Subdomain: Addition, Subtraction & Money

3.CA.2 Instructional Framework

Assessed On:

☒ Checkpoint 1 ☐ Checkpoint 2 ☐ Checkpoint 3 ☒ Summative

Content Limits:

- Limit numbers to whole numbers less than 1,000,000.
- Limit sums and differences to less than or equal to 1,000,000.
- Items may include one- and two-step problems.
- Items should use an open box, not variables, to represent an unknown number.
- Specific strategies should not be tested.

Clarifications:

- Provide a variety of addition and subtraction problem structures, including:
 - [Add To \(Result, Change and Start Unknown\)](#)
 - [Take From \(Result, Change and Start Unknown\)](#)
 - [Put Together/Take Apart \(Total, Addend, and Both Addends Unknown\)](#)
 - [Compare \(Difference, Bigger, and Smaller Unknown\)](#)
- The keypad in the ILEARN testing system does not allow students to enter a comma between each period in a multi-digit number. (Example: 13,323 would be entered as 13323.)

Calculator Availability: Not Allowed

Expected Academic Vocabulary: sum, difference, addend, minuend, subtrahend, equation

Examples of Context at Varying Difficulty Levels

Context: Easy	Limit addition and subtraction equations to those that do not require regrouping. Limit addends and subtrahends to less than 1000. Include only one-step result unknown, total unknown, and difference unknown problems.
Context: Medium	Addition and subtraction equations may include regrouping one or more consecutive times. Limit addition equations to only two addends and subtraction equations to one minuend.
Context: Difficult	Addition equations may have more than two addends and subtraction equations may have more than one minuend.

Proficiency Level Descriptors and Example Items



Looking Back: 2.CA.1	Looking Ahead: This concept is not specifically addressed in the Indiana Academic Standards in subsequent grade levels.
Below Proficiency: Identify an equation that will solve a real-world addition or subtraction problem.	
Mary and Tim played a game. They earned a total of 500 points. Mary earned 382 points. Which equation models the number of points Tim earned? a. $382 + 500 = \square$ b. $500 - \square = 382$ c. $500 + 382 = \square$ d. $\square - 382 = 500$	This is a DOK 2 item because students must identify an expression that models how to solve a real-world problem. This item is easy because the values are less than 1000 and students must identify the equation that will provide a solution; students do not have to solve for the solution.
Approaching Proficiency: Solve one-step real-world addition or subtraction problems.	
Maple School students sold raffle tickets. • Third grade students sold 135 tickets. • Fourth grade students sold 261 tickets. How many total tickets were sold by third and fourth grade? Answer: 396	This is a DOK 2 item because students must solve a one-step word problem This item is easy because the addends are less than 1000, no regrouping is required, and it is a put together/total unknown structure.
At Proficiency: Solve multi-step real-world addition or subtraction problems.	
Cassie's family used 9,546 gallons of water last month. • Jayson's family used 396 gallons less than Cassie's family. • Max's family used 784 gallons less than Jayson's family. How many gallons of water did Max's family use last month? Answer: 8,366	This is a DOK 2 item because students are solving a two-step, real-world problem This item is medium difficulty because regrouping is required.



	*Students may choose different entry points for this problem. Some may choose to subtract 396 and 784 individually or some may choose to add the two values, then subtract the total from the larger number.
Part A Jack spent \$94 at the trampoline park last Friday. • He bought 2 zipline tickets for \$17 each. • He bought lunch for \$12 dollars. The remaining amount of money was spent on the entrance fee. How much did Jack pay to enter the trampoline park? Answer: \$48 Part B The trampoline park gives a \$5 discount to everyone who comes on Wednesdays. How much money would Jack have to pay to enter the park on a Wednesday? Answer: \$43	This is a DOK 3 item because students must solve a two-step real-world problem. This item is difficult because Part A is a two-step problem. Part B is a one-step problem, however, the final solution depends on the solution to Part A.
Above Proficiency: Explain or justify solutions to multi-step real-world addition or subtraction problems.	
Felicia earned \$8,429 in one year working at her part-time job. • She spent \$1,349 on a new cell phone. • She spent \$945 on a vacation. • Felicia calculates the money she has left below. Part A Which statement is true? a. Felicia has \$6,175 leftover. b. Felicia has \$6,285 leftover. c. Felicia has \$6,135 leftover. d. Felicia \$7,825 leftover. Part B In the box below, use words, numbers, or symbols to explain each step you	This is a DOK 3 item because students must justify the reasonableness of their solution. This item is difficult because regrouping is required multiple times and more than one minuend is required.



completed to get to the solution in Part A.

Answer: Students should explain or show any strategies they used to find the solution to Part A.