Los Angeles Unified School District
Office of Curriculum, Instruction, and School Support

Math Myths and Misconceptions
Addition Concept Examples for the Facilitator

To the Session Facilitator: The examples and information given below is intended to be background information for you. Session participants should be given the opportunity to come up with examples themselves rather than these examples being given to them. This is just a limited sample of the many possible examples. The critical piece here is that the examples provided by the participants match the conceptual understanding for each concept type.

Addition Concept	Examples	Impact on Future Learning
Combining	*"Two apples and three pears. How many pieces of fruit?"* *"Six chairs in this row. Seven chairs in that row. What is the total number of chairs?"* *"Nolani picked nine daisies and four roses. How many flowers did she pick?"*	The differences between these two ways of looking at addition, while seemingly subtle, are important in a child's overall understanding of how this operation works. The differences arise from the situation in which the problem is presented. The mental picture created between a combining problem and an increase problem is significant. While a number-only problem, such as 9 + 4 gives the sum of 13, the mental picture of what is occurring can be quite different. Understanding that addition can describe a variety of situations will assist children in their overall understanding of the functions and mechanics of mathematics—a critical element as they continue their learning towards higher mathematics.
Change or Increase from a Starting Point	*"Kaden ran five miles to the north and then ran one mile to the east. How far did he run?"* *"A game used to cost $8. It was increased by $1.50. What is the cost of the game now?"* *"Last year my shoe size was 6. When I went to buy new shoes, my foot had grown 2 sizes. What size shoe do I need now?"*	
Missing Addend (also known as Counting On)	*"It costs $14 for a book. You have $9. How much more money do you need?"* *"Marta needs 23 lemons and she has already picked 15 from her tree. How many more lemons will she need to pick to reach 23?"* *"When David counted his card collection, he found he only had 16 cards from his favorite team. A full collection would have 30 cards. How many more cards does he need to have a full collection?"*	The missing addend or counting on strategy is a strong model of the inverse relationship between addition and subtraction. Many children will first count up to reach a total before they subtract to find a difference. Both are useful strategies for children in developing number sense and flexibility in thinking.