

7. **Doubles plus one:** This strategy overlaps the other strategies of doubles and counting on by one. While more sophisticated, students should be taught to use this strategy when the addends are consecutive numbers. For instance, $7 + 8$ becomes $7 + 7 + 1$. Another example, $8 + 9$ becomes $8 + 8 + 1$. That's seven more off the list.
8. **Doubles plus two:** This method works when the addends differ by two. When this occurs it is possible to subtract 1 from one addend and add one to the other addend. This results in a doubles fact that has already been memorized, $7 + 5$ becomes $6 + 6$. Another example, $6 + 8$ becomes $7 + 7$. Some people call the **Doubles Plus 2** strategy **Sharing Doubles** and attack the problem differently. Using the Doubles plus 2 strategy, $6 + 8$ becomes $6 + 6 + 2$. $7 + 5$ becomes $5 + 5 + 2$. We now have 31 facts left to learn.
9. **Nines:** It should be pointed out to students that when adding nine, the ones digit in the sum is always one less than the number added to 9. For example $7 + 9 = 16$, the 6 is one less than 7. Another example, $5 + 9 = 14$. 45 facts to go.
10. **Commutativity:** By changing the order, $3 + 4$ to $4 + 3$, it should be pointed out that's an additional 21 facts the students now know. That leaves 10 facts to learn. But it's really five because the commutative property can be used on those 10.

There are other strategies to learning the addition facts. Some teachers might use "Combinations to 5" as a strategy. Rather than using Sharing doubles, some teachers might use "Doubles plus 2". That doesn't matter. What does matter is you make sure students understand the meaning of addition and you develop strategies to help them memorize the facts.

It is expected that students respond automatically when asked a basic addition fact.

Subtraction

Thinking Strategies for Learning the Subtraction Facts

1. **Fact families:** This strategy is the most commonly used and works when students understand the relationship between addition and subtraction. When students see $6 - 2$ and think $2 + ? = 6$. However, if this strategy is used with the following strategies, students will find greater success in a shorter period of time.
2. **Counting backwards:** This method is similar to Counting on used in addition. It isn't quite as easy. Some might think if you can count forward, then you can automatically count backward. This is not true –try saying the alphabet backwards. Students should only be allowed to count back **at most three**.
3. **Zeros:** The pattern for subtracting zero is readily recognizable. $5 - 0 = 5$