

# 7 Steps of Numerical Fluency

Math experts say there are 7 steps to numerical fluency children must understand by the time they leave the primary grades. If they get stuck on anyone of these steps, they will go no further in their mathematical skills.



1. **One to one correspondence:** Matching 2 groups so each member of one group is matched up with an object from the second group. It is also the ability to count objects so that each object counted is matched with one number word.
2. **Inclusion of set:** The last number stated is the number of objects in the set. It is the ability to count a set of objects and when asked how many, the child can say the number of objects without recounting the objects (even after they have been mixed up).
3. **Counting on:** Students start the counting sequence with one and continue until the answer is reached. Then the student recognizes that it is not necessary to reconstruct the entire counting sequence and begins "counting on" when another number is added to the original.
4. **Subitizing:** Checks on a child's ability to see patterns quickly. Example: Show them pictures with recognizable patterns like you would see on dice for 3, 4, 5, 6. Use dot cards, ten frames, etc. The idea is to recognize the amount without having to physically count.
5. **More Than/Less Than/Equal To:** Children can look at a set of objects or are given a number and can build a set with either one more than, one less than, or equal to the original set or number. The student should also be able to look at two sets of objects and tell whether the second set is more than, less than, or equal to the first set.
6. **Part / Part /Whole:** One of the most important concepts in number sense, this concept allows children to compose and decompose numbers by looking at the whole and the parts that make up the whole.
7. **Unitizing:** Goes from counting by ones to now count by sets or groups such as 5, 10, 20, etc. This concept is the foundation for their understanding of the base 10 system.