



in personal communication, Doug suggested that if he could re-arrange this hierarchy, he'd have "subitizing" adjoin counting (March, 2008).

Table 1.

Task Analysis of Number Sense and Operations Strand

from Methe & Riley-Tillman (in press).

Skill Area	Description
Counting	Both non-verbal and verbal enumeration of smaller to larger sets develops. Counting aloud begins with one and progresses accurately. Number words used to identify sets. Important benchmarks are both recognizing and producing numerals accurately (from smaller sets).
Comparing and Ordering	Quantities and sets are compared using non-verbal identification progressing to verbal labels (more, equal, less). Ability to recognize and produce ordinal numbers begins with 1-5 and progresses through 30 by age 6. Prerequisite for establishing the idea of movement and change; requires the envisioning of a "mental number line" (Griffin, Case, & Siegler, 1994).
Equal Partitioning	Basic ability to equally partition small sets (6 into 3 and 3) develops at 3 years. This basic idea expands and develops into larger sets of items, and holds true for word problems.
Composing and Decomposing	Children develop more sophistication over time, and can gradually deal with larger numbers in a more abstract fashion, when asked to find subsets embedded within larger sets of items or numbers (7 has 3 and 4, but also has 5 and 2).
Grouping and Place Value	Typically refers to the progression in abstractly grouping objects into sets of ten (17 means 10 then 7; 24 means "two-ten" and 4). Relates to the prior benchmark in terms of knowing how many are left (or needed) when "counting up" to ten. Regarding written numbers, knowing that each successive numeral represents larger groups of sets.
Adding To / Taking Away	Progression in ability to notice increases and decreases in sets of items. Outcome goal is that children know how to make sets larger and smaller (in progressively larger increments) by using accurate strategies that do not rely on laborious enumeration, counting, or equal partitioning.

Note. Adapted from graphic in Clements (2004; p.18).