Mathematics Key Developmental Indicators

31. Number words and symbols: Children recognize and use number words and symbols.	Children recognize and name numerals in their environment. They understand that cardinal numbers (e.g., one, two, three) refer to quantity and that ordinal numbers (e.g., first, second, last) refer to the order of things. They write numerals.
32. Counting: Children count things.	Children count with one-to-one correspondence (e.g., touch an object and say a number). They understand that the last number counted tells "how many." Children compare and order quantities (e.g., more, fewer/less, same). They understand the concepts of "adding to" and "taking away."
33. Part-whole relationships: Children combine and separate quantities of objects.	Children "compose" and "decompose" quantities. They use parts to make up the whole set (e.g., combine two blocks and three blocks to make a set of five blocks). They also divide the whole set into parts (e.g., separate five blocks into one block and four blocks).
34. Shapes: Children identify, name, and describe shapes.	Children recognize, compare, and sort two- and three-dimensional shapes (e.g., triangle, rectangle, circle; cone, cube, sphere). They understand what makes a shape a shape (e.g., all triangles have three sides and three points). Children transform (change) shapes by putting things together and taking them apart.
35. Spatial awareness: Children recognize spatial relationships among people and objects.	Children use position, direction, and distance words to describe actions and the location of objects in their environment. They solve simple spatial problems in play (e.g., building with blocks, doing puzzles, wrapping objects).
36. Measuring: Children measure to describe, compare, and order things.	Children use measurement terms to describe attributes (i.e., length, volume, weight, temperature, and time). They compare quantities (e.g., same/different, bigger/smaller, more/less, heavier/lighter) and order them (e.g., shortest/medium/longest). They estimate relative quantities (e.g., whether something has more or less).
37. Unit: Children understand and use the concept of unit.	Children understand that a unit is a standard (unvarying) quantity. They measure using unconventional (e.g., block) and conventional (e.g., ruler) measuring tools). They use correct measuring procedures (e.g., begin at the baseline and measure without gaps or overlaps).
38. Patterns: Children identify, describe, copy, complete, and create patterns.	Children lay the foundation for algebra by working with simple alternating patterns (e.g., ABABAB) and progressing to more complex patterns (e.g., AABAABAAB, ABCABCABC). They recognize repeating sequences (e.g., the daily routine, movement patterns) and begin to identify and describe increasing and decreasing patterns (e.g., height grows as age increases).
39. Data analysis: Children use information about quantity to draw conclusions, make decisions, and solve problems.	Children collect, organize, and compare information based on measurable attributes. They represent data in simple ways (e.g., tally marks, stacks of blocks, pictures, lists, charts, graphs). They interpret and apply information in their work and play (e.g., how many cups are needed if two children are absent).