Mathematics Benchmarks for Grade 1

Mathematical Content
Strand: *Operations and Algebraic Thinking (OA)*
Represent and solve problems involving addition and subtraction.
Add and subtract numbers up to 20 to solve word problems
Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20
Understand and apply properties of operations and the relationship between addition and subtraction.
Apply properties of operations as strategies to add and subtract
Use subtraction as an unknown-addend problem with numbers up to 20
Add and subtract within 20.
Relate counting to addition and subtraction
Add and subtract numbers up to 20
Add and subtract numbers up to 10 fluently
Work with addition and subtraction equations.
Describe the meaning of the equal sign in an addition and subtraction equation
Evaluate whether equations involving addition and subtraction are true or false
Determine the unknown whole number in an addition or subtraction equation involving three whole numbers
Strand: *Number and Operations in Base Ten (NBT)*
Extend the counting sequence.
Count numbers up to 120, starting at any number less than 120
Read numerals from 1 to 120
Write numerals from 1 to 120
Represent a number of up to 120 objects with a written numeral
Understand place value.
Represent the two digits of a two-digit number in amounts of tens and ones
Compare two two-digit numbers based on a breakdown into tens and ones
Record the results of comparisons between two two-digit numbers using the symbols >, =, and <
Use place value understanding and properties of operations to add and subtract.
Add a two-digit and a one-digit number using numbers up to 100
Add a two-digit number and a multiple of 10 using numbers up to 100
Add and subtract 10 from a two-digit number mentally

Explain the process of adding and subtracting 10 from a two-digit number mentally
Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 leading to positive or zero differences
Explain the reasoning used to subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 leading to positive or zero differences
Strand: *Measurement and Data (MD)*
Measure lengths indirectly and by iterating length units.
Order three objects by length
Compare the lengths of two objects indirectly by using a third object
Express the length of an object as a whole number of length units
Relate the length measurement of an object to the number of same-size length units that span it with no gaps or overlaps
Tell and write time.
Write time in hours and half-hours using analog and digital clocks
Tell time in hours and half-hours using analog and digital clocks
Represent and interpret data.
Organize data into up to three categories
Assess the total number of data points overall and in up to three categories
Compare the number of data points in up to three categories to each other
Strand: *Geometry (G)*
Reason with shapes and their attributes.
Distinguish between defining attributes versus non-defining attributes of shapes
Build and draw shapes that demonstrate defining attributes
Compose two-dimensional shapes to create a composite shape
Compose two-dimensional composite shapes into a new shape
Compose three-dimensional shapes to create a composite shape
Compose three-dimensional composite shapes into a new shape
Partition circles and rectangles into two and four equal shares
Describe two and four shares of partitioned circles and rectangles using words and phrases
Describe a whole in terms of shares

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Mathematical Practice
Strand: *Solve Problems (MP1)*
1. Make sense of problems and persevere in solving them.
Make sense of your problem
Reflect on your thinking as you solve your problem
Keep trying when your problem is hard
Check whether your answer makes sense
Solve problems in more than one way
Compare the strategies you and others use
Strand: *Reason (MP2)*
2. Reason abstractly and quantitatively.
Create mathematical representations using numbers, words, pictures, symbols, gestures, tables, graphs, and concrete objects
Make sense of the representations you and others use
Make connections between representations
Strand: *Construct Arguments (MP3)*
3. Construct viable arguments and critique the reasoning of others.
Make mathematical conjectures and arguments
Make sense of others' mathematical thinking
Strand: *Model (MP4)*
4. Model with mathematics.
Model real-world situations using graphs, drawings, tables, symbols, numbers, diagrams, and other representations
Use mathematical models to solve problems and answer questions
Strand: *Use Tools (MP5)*
5. Use appropriate tools strategically.
Choose appropriate tools
Use tools effectively and make sense of your results
Strand: *Attend to Precision (MP6)*
6. Attend to precision.
Explain your mathematical thinking clearly and precisely
Use an appropriate level of precision for your problem
Use clear labels, units, and mathematical language
Think about accuracy and efficiency when you count, measure, and calculate

Strand: *Use Structure (MP7)*
7. Look for and make use of structure.
Look for mathematical structures such as categories, patterns, and properties
Use structures to solve problems and answer questions
Strand: *Express Regularity (MP8)*
8. Look for and express regularity in repeated reasoning.
Create and justify rules, shortcuts, and generalizations