

Meridian Joint School District  
 Benchmark Mathematics Assessments  
 Test Blueprint – Grade 4

| Grade  | Standard   | Goal   | Objective Assessed               | Test Distribution |                          |
|--|--|--|----------------------------------|-------------------|--------------------------|
|  |  |  |                                  | Benchmark Test    | ISAT<br>(for comparison) |
| 4  | 1<br>Number and<br>Operation                                 | 1.1<br>Understand and use numbers  | 1.1.2<br>1.1.4                   | 43.3%             | 38-40%                   |
|  |  | 1.2<br>Perform computations accurately   | 1.2.2<br>1.2.3<br>1.2.5          |                   |                          |
|  |  | 1.3<br>Estimate and judge<br>reasonableness of results                                 | 1.3.1                            |                   |                          |
|  | 2<br>Concepts and<br>Principles of<br>Measurement            | 2.1<br>Understand and use customary<br>and metric measurements                         | 2.1.1<br>2.1.2<br>2.1.3<br>2.1.4 | 16.7%             | 18-20%                   |
|  | 3<br>Concepts and<br>Language of<br>Algebra and<br>Functions | 3.1<br>Use algebraic symbolism as a tool<br>to represent mathematical<br>relationships | 3.1.4                            | 13.3%             | 15-18%                   |
|  |  | 3.3<br>Solve algebraic equations and<br>inequalities                                   | 3.3.1                            |                   |                          |
|  |  | 3.4<br>Understand the concept of<br>functions  | 3.4.1                            |                   |                          |
|  | 4<br>Concepts and<br>Principles of<br>Geometry               | 4.1<br>Apply concepts of size, shape, and<br>spatial relationships                     | 4.1.1<br>4.1.2<br>4.1.3          | 16.7%             | 15-18%                   |
|  |  | 4.3<br>Apply graphing in two dimensions  | 4.3.1                            |                   |                          |
|  | 5<br>Data<br>Analysis,<br>Probability,<br>and Statistics     | 5.1<br>Understand data analysis  | 5.1.1<br>5.1.2                   | 10%               | 15-18%                   |
| 5.4<br>Understand basic concepts of<br>probability |  | 5.4.1  |                                  |                   |                          |
|  |  |  |                                  | <b>Total=100%</b> |                          |

| Topic<br>(Number of Questions)   | Standard<br>Number | State Objective<br>Curriculum Item   |
|--|--------------------|--|
| <b>Standard 1 - Number &amp; Operation</b>   |                    |  |
| Place Value (1,2)  | 4.M.1.1.2          | <b>Identify and apply place value in whole numbers.</b><br><ul style="list-style-type: none"> <li>Identify place value to 1,000,000</li> </ul>   |
| Read, write & compare fractions (3)  | 4.M.1.1.4          | <b>Read, write, compare, and order commonly used fractions with pictorial representations.</b>   |
| Add and subtract whole numbers (4,5)   | 4.M.1.2.2          | <b>Add and subtract whole numbers.</b><br><ul style="list-style-type: none"> <li>Addition &amp; Subtraction – up to 5-digit with and without regrouping</li> </ul>   |
| Multiply whole numbers (6,7,8,9)   | 4.M.1.2.3          | <b>Multiply up to two-digit by two-digit whole numbers and divide whole numbers by one-digit divisors</b><br><ul style="list-style-type: none"> <li><i>Multiplication - 3-digit by 1-digit and 2-digit by 2-digit</i></li> </ul>   |
| Divide whole numbers with 1-digit divisor (6,7,8,9)                                  | 4.M.1.2.3          | <b>Multiply up to two-digit by two-digit whole numbers and divide whole numbers by one-digit divisors</b>  |
| Add and subtract decimals using money (10,11)  | 4.M.1.2.5          | <b>Add and subtract decimals using money.</b>  |
| Rounding (12,13)   | 4.M.1.3.1          | <b>Estimate to predict computation results.</b><br><ul style="list-style-type: none"> <li>Rounding to nearest 100</li> </ul>   |
| Estimating a product (12,13)   | 4.M.1.3.1          | <b>Estimate to predict computation results.</b>  |
| <b>Standard 2 - Measurement</b>  |                    |  |
| Use appropriate tool to measure length – metric or customary (14,15)                 | 4.M.2.1.1          | <b>Select and use appropriate units and tools to make the formal measurements of length, temperature, and weight in both systems.</b><br><ul style="list-style-type: none"> <li><i>Length - measure to nearest 1/2 inch</i></li> <li><i>Metric system - length - measure to the nearest mm, cm, m</i></li> </ul>   |
| Select an appropriate unit for capacity or mass - metric or customary (14,15)        | 4.M.2.1.1          | <b>Select and use appropriate units and tools to make the formal measurements of length, temperature, and weight in both systems.</b><br><ul style="list-style-type: none"> <li><i>Capacity- choose the appropriate measurement (cup, quart, gallon, mL, L)</i></li> <li><i>Weight – choose appropriate measurement (ounce, pound, ton, g, kg)</i></li> </ul>  |
| Estimate an appropriate unit for length, capacity or mass – customary or metric (16) | 4.M.2.1.2          | <b>Estimate length, time, weight, and temperature in real-world problems using standard units.</b><br><ul style="list-style-type: none"> <li><i>Length – choose appropriate measurement (inch, foot, yard)</i></li> <li><i>Weight – choose appropriate measurement (ounce, pound, ton)</i></li> <li><i>Capacity - choose the appropriate measurement (cup, quart, gallon)</i></li> </ul>   |
| Tell Time (17)   | 4.M.2.1.3          | <b>Tell time to the nearest minute using digital and analog clocks.</b>  |
| Elapsed Time (18)  | 4.M.2.1.4          | <b>Solve real-world problems related to elapsed time.</b>  |
| <b>Standard 3 – Algebra</b>  |                    |  |
| Read and use symbols of “<,” “>,” and “=”. (19)                                      | 4.M.3.1.4          | <b>Read and use symbols of “&lt;,” “&gt;,” and “=” to express relationships with numbers through 1,000,000.</b>  |
| Solve missing factor equations. (20,21)  | 4.M.3.3.1          | <b>Solve missing factor equations.</b>   |
| Identify the rule (function) in a function chart. (22)                               | 4.M.3.4.1          | <b>Identify the rule (function) for a pattern using whole numbers and addition and then extend the pattern.</b>  |
| <b>Standard 4 – Geometry</b>   |                    |  |
| Identify perpendicular, parallel, and intersecting lines. (23,24)                    | 4.M.4.1.1          | <b>Identify, compare, and analyze attributes of two- and three-dimensional shapes, including parallel, intersecting, and perpendicular lines, and develop vocabulary to describe the attributes.</b>   |
| Identify attributes of geometrical shapes. (23,24)                                   | 4.M.4.1.1          | <b>Identify, compare, and analyze attributes of two- and three-dimensional shapes, including parallel, intersecting, and perpendicular lines, and develop vocabulary to describe the attributes.</b><br><ul style="list-style-type: none"> <li>Identify quadrilaterals (square, rectangle, rhombus, trapezoid)</li> <li>Identify hexagon</li> <li>Polyhedra - faces, edges, vertices (cube, cylinder, cone, sphere, pyramid, rectangular prism)</li> </ul> |
| Predict results of flips & slides. (25)  | 4.M.4.1.2          | <b>Predict the results of sliding and flipping two-dimensional shapes.</b>   |
| Identify multiple lines of symmetry. (26)  | 4.M.4.1.3          | <b>Identify multiple lines of symmetry in two-dimensional shapes.</b>  |
| Identify ordered pair for a point in the first quadrant on a coordinate grid. (27)   | 4.M.4.3.1          | <b>Use ordered pairs to identify the position of a point in the first quadrant on a coordinate grid.</b>   |
| <b>Standard 5 – Data Analysis</b>  |                    |  |
| Read and interpret information on a bar graph and a line graph. (28,29)              | 4.M.5.1.1          | <b>Read and interpret simple tables, charts, bar graphs, and line graphs.</b>  |
| Predict the results of simple probability experiments. (30)                          | 4.M.5.4.1          | <b>Predict the results of simple probability experiments using coins or spinners (e.g., 3 out of 6 choices).</b>   |