



Math Teachers Press, Inc.

4850 Park Glen Road, Minneapolis, MN 55416
phone (800) 852-2435 fax (952) 546-7502

Georgia's K-12 Mathematics Standards Correlated to *Moving with Math* FOUNDATIONS for ALGEBRA intermediate/Middle (IM) Grade 5

| | | IM1 <i>Number, Reasoning, and Data</i> Teacher Guide Page (and Student Book Page) and Skill Builders (SB) | IM2 <i>Fractions, Decimals, Percent, and Probability</i> Teacher Guide Page (and Student Book Page) and Skill Builders (SB) | IM3 <i>Geometry, Measurement, and Graphing</i> Teacher Guide Page (and Student Book Page) and Skill Builders (SB) |
|-----------------|--|--|--|--|
| | NUMERICAL REASONING - place value, multiplying by powers of 10, multiplication and division of multi-digit numbers, fractions, decimal numbers, numerical expressions | | | |
| 5.NR.1: | Use place value understanding to solve real-life, mathematical problems. | | | |
| 5.NR.1.1 | Explain that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. | 2 SB: 1-1 | SB: 1-1 | SB: 1-1 |
| 5.NR.1.2 | Explain patterns in the placement of digits when multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10, up to 10^3 . | 4 SB: 1-2, 1-3 | | |
| 5.NR.2: | Multiply and divide multi-digit whole numbers to solve relevant, mathematical problems. | | | |
| 5.NR.2.1 | Fluently multiply multi-digit (up to 3-digit by 2-digit) whole numbers to solve authentic problems. | 32-39, 50, 53-55 SB: 8-1 to 8-5, 8-7, 45-8, 45-12, 45-16 | | |
| 5.NR.2.2 | Fluently divide multi-digit whole numbers (up to 4-digit dividends and 2-digit divisors no greater than 25) to solve practical problems. | 39-47, 49, 50, 53-55 SB: 9-1 to 9-3, 10-2, 10-4, 10-7, 45-8, 45-12, 45-16 | SB: 9-1, 10-1 | SB: 9-1 |
| 5.NR.3: | Describe fractions and perform operations with fractions to solve relevant, mathematical problems using part-whole strategies and visual models | | | |

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| 5.NR.3.1 | Explain the meaning of a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers. | | 2, 3, 4 SB: 11-3 | |
| 5.NR.3.2 | Compare and order up to three fractions with different numerators and/or different denominators by flexibly using a variety of tools and strategies. | | SB: 13-2 | |
| 5.NR.3.3 | Model and solve problems involving addition and subtraction of fractions and mixed numbers with unlike denominators. | | 19-23, 26, 27 SB: 17-1 to 17-3, 18-1, 18-2, 45-3, 45-10 | |
| 5.NR.3.4 | Model and solve problems involving multiplication of a fraction and a whole number. | | 30-32 SB: 19-3 to 19-5 | |
| 5.NR.3.5 | Explain why multiplying a whole number by a fraction greater than one results in a product greater than the whole number, and why multiplying a whole number by a fraction less than one results in a product less than the whole number and multiplying a whole number by a fraction equal to one results in a product equal to the whole number. | | 28, 30-32 | |
| 5.NR.3.6 | Model and solve problems involving division of a unit fraction by a whole number and a whole number by a unit fraction. | | 34 | |
| 5.NR.4: | Read, write, and compare decimal numbers to the thousandths place, and round and perform operations with decimal numbers to the hundredths place to solve relevant, mathematical problems | | | |
| 5.NR.4.1 | Read and write decimal numbers to the thousandths place using base ten numerals written in standard form and expanded form. | | 41-46 SB: 21-1 to 21-3, 22-1, 22-2, 23-1, 23-3, 23-4, 25-4, 26-1 | SB: 22-1, 23-1 |
| 5.NR.4.2 | Represent, compare, and order decimal numbers to the thousandths place based on the meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons. | | 49-51 SB: 24-1 to 24-3 | SB: 24-1 |

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| 5.NR.4.3 | Use place value understanding to round decimal numbers to the hundredths place. | | 52, 53 SB: 51-1 to 51-4 | |
| 5.NR.4.4 | Solve problems involving addition and subtraction of decimal numbers to the hundredths place using a variety of strategies. | | 54, 55 SB: 26-2 to 26-4 | SB: 26-1 |
| 5.NR.5: | Write, interpret, and evaluate numerical expressions within authentic problems. | | | |
| 5.NR.5.1 | Write, interpret, and evaluate simple numerical expressions involving whole numbers with or without grouping symbols to represent actual situations. | 22, 50, 55 SB: 45-2, 45-11, 45-12, 45-16 | 35, 36, 65 SB: 45-1, 45-2, 45-6, 45-9, 45-15 | |
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| | PATTERNING & ALGEBRAIC REASONING – generating patterns, plotting ordered pairs in the first quadrant | | | |
| 5.PAR.6: | Solve relevant problems by creating and analyzing numerical patterns using the given rule(s). | | | |
| 5.PAR.6.1 | Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms by completing a table. | 76 SB: 44-5 | | |
| 5.PAR.6.2 | Represent problems by plotting ordered pairs and explain coordinate values of points in the first quadrant of the coordinate plane. | 78 SB: 44-4 | | |
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| | MEASUREMENT & DATA REASONING – measurements within the metric system, measurement conversions and time as a unit of measurement | | | |
| 5.MDR.7: | Solve problems involving customary measurements, metric measurements, and time and analyze graphical displays of data to answer relevant questions. | | | |
| 5.MDR.7.1 | Explore realistic problems involving different units of measurement, including distance, mass, weight, volume, and time. | | | 28, 38, 39 SB: 40-1 to 40-3, 45-1, 45-3, 45-4 |
| 5.MDR.7.2 | Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to solve problems relevant to everyday life. | 61 SB: 46-5 | | 66, 68-73, 75 SB: 47-1 to 47-3, 47-5 to 47-7, 48-1 to 48-3, 48-5 |

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| 5.MDR.7.3 | Convert among units within the metric system and then apply these conversions to solve multistep, practical problems. | | | 33, 35, 37 SB: 36-6, 41-2, 42-2 |
| 5.MDR.7.4 | Convert among units within relative sizes of measurement units within the customary measurement system. | | | 31, 34, 36 SB: 36-4, 41-1, 42-1 |
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| | GEOMETRIC & SPATIAL REASONING – Properties of polygons and rectangular prisms, classify polygons | | | |
| 5.GSR.8: | Examine properties of polygons and rectangular prisms, classify polygons by their properties, and discover volume of right rectangular prisms. | | | |
| 5.GSR.8.1 | Classify, compare, and contrast polygons based on properties. | | | 7, 8 SB: 34-1 to 34-3 |
| 5.GSR.8.2 | Determine, through exploration and investigation, that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. | | | 9 SB: 34-4, 34-5, 34-10 |
| 5.GSR.8.3 I | Investigate volume of right rectangular prisms by packing them with unit cubes without gaps or overlaps. Then, determine the total volume to solve problems. | | | 52, 53 SB: 39-1, 39-5 |
| 5.GSR.8.4 | Discover and explain how the volume of a right rectangular prism can be found by multiplying the area of the base times the height to solve authentic, mathematical problems. | | | 53 SB: 39-2 |