

**Content Standard A4
Third Grade Level
Functions and Relationships**

State Mathematics Performance Standards 3 rd -5 th	KGBSD Student Objectives	Grade Level Expectations GLE's
<p>M4.2.1 Use patterns and their extensions to make predictions and solve problems; describe patterns found in the number system including those formed by multiples, factors, perfect squares, and powers of 10.</p> <p>M4.2.2 Generate and solve simple functions by identifying and applying multiplication and division patterns.</p> <p>M4.2.3 Use a calculator to find a missing item in a number sequence.</p> <p>M4.2.4 Use words, lists, and table to represent and analyze patterns.</p> <p>M4.2.5 Explain the purpose of variables and use them in open sentences to express relationships and describe simple functions.</p>	<p>1.1 Use lists, tables, charts, and calculators to express, predict, extend patterns, relationships and algebraic thinking</p> <p>1.2 Identify a missing element in a pattern up to the next three terms or explaining how missing elements could be found</p> <p>2.1 Recognize and extend multiplication patterns using pictorial representation and matrix manipulatives</p> <p>3.1 Will use the “equal to” function to build a sequence, and to predict a future value</p> <p>4.1 Generate, identify and extend patterns in a table of paired numbers based on a real life situations such as insects and eggs</p> <p>5.1 Use variable to express relations in the context of; addends, subtrahends, factors, dividends (divisors) i.e.. incredible equations? What equals 15?)</p>	<p>Functions and Relationships: Describing Patterns and Functions The student demonstrates conceptual understanding of functions by</p> <p>[3] F&R-1 identifying a missing element in a pattern up to the next three terms (identifying a number using addition or subtraction or objects); or explaining how missing elements could be found (M4.1.1)</p> <p>[3] F&R-2 [expressing a generalization of a pattern using words L] (M4.1.1 & M4.1.2)</p> <p>[3] F&R-3 [using manipulatives, including a calculator, as tools when describing, extending, or representing patterns L] (M4.1.1 & M4.1.3)</p> <p><u>Functions and Relationships: Modeling and Solving Equations and Inequalities</u> The student demonstrates algebraic thinking by</p> <p>[3] F&R-4 using an open number sentence (addition or subtraction) to solve for an unknown represented by a box or circle (e.g., $5+ = 16$, $- 7=4$, $5+2=$) (M4.1.4)</p> <p>[3] F&R-5 using appropriate vocabulary or symbols for greater than, less than, or equal to (M4.1.4)</p>

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	5.2 Using an open number sentence (addition or subtraction) to solve for an unknown (represented by a box or circle)	