

# Math ISAT: Algebra, Functions, and Mathematical Models

## Skills: Concept of Functions (Patterns)

Students:	<b>RIT Above 260:</b> <ul style="list-style-type: none"><li>• Determines the minimum and maximum of a function</li></ul>
Students:	<b>RIT 251-260:</b> <ul style="list-style-type: none"><li>• Estimates the limit of a given infinite sequence (e.g., given the sequence <math>1/n</math>, as <math>n</math> gets larger)</li><li>• Determines the domain and range of a function</li><li>• Identifies the equation of a parabola</li><li>• Determines the vertex of a parabola</li><li>• Determines the effects of parameter changes on functions</li></ul>
Students:	<b>RIT 241-250:</b> <ul style="list-style-type: none"><li>• Represents linear patterns using algebraic expressions</li><li>• Uses an algebraic expression to represent exponential patterns</li><li>• Determines the domain and range of a function</li></ul>
Students:	<b>RIT 231-240:</b> <ul style="list-style-type: none"><li>• Recognizes and extends arithmetic sequences (linear patterns)</li><li>• Recognizes and extends the Fibonacci sequence</li></ul>
Students:	<b>RIT 221-230:</b> <ul style="list-style-type: none"><li>• Represents patterns using written descriptions (e.g., explains the rule)</li><li>• Recognizes and extends geometric sequences</li><li>• Recognizes and extends a sequence of triangular numbers</li></ul>
Students:	<b>RIT 211-220:</b> <ul style="list-style-type: none"><li>• Recognizes patterns in designs</li><li>• Recognizes simple growing patterns</li><li>• Analyzes patterns to identify rules</li><li>• Analyzes patterns in equations to identify rules</li><li>• Identifies rules and applies them to new patterns</li></ul>
Students:	<b>RIT 201-210:</b> <ul style="list-style-type: none"><li>• Recognizes decimal and fraction linear patterns</li><li>• Recognizes simple growing patterns</li><li>• Analyzes patterns to identify rules</li><li>• Analyzes geometric patterns</li></ul>
Students:	<b>RIT 191-200:</b> <ul style="list-style-type: none"><li>• Recognizes basic whole-number linear patterns</li><li>• Extends simple object patterns</li><li>• Extends simple letter patterns</li></ul>
Students:	<b>RIT 181-190:</b> <ul style="list-style-type: none"><li>• Recognizes patterns in sets representing numbers</li><li>• Recognizes patterns in number tables</li><li>• Recognizes letter patterns</li><li>• Recognizes basic whole-number linear patterns</li><li>• Extends simple number patterns</li><li>• Extends simple object patterns</li></ul>
Students:	<b>RIT 171-180:</b> <ul style="list-style-type: none"><li>• Recognizes number patterns (e.g., 2's, 5's, 10's, 50's, 100's)</li><li>• Extends simple number patterns</li><li>• Extends simple geometric shape patterns</li></ul>
Students:	<b>RIT Below 171:</b> <ul style="list-style-type: none"><li>• Recognizes number patterns (e.g., 2's, 5's, 10's, 50's, 100's)</li><li>• Extends simple geometric shape patterns</li></ul>