

**SOAR: Ratios and Proportional Relationship Survey Summary**

**Grade 6 End Year**

Category I	Tier I Intervention <i>(Classroom Instruction)</i>	Tier II Intervention <i>(along with Classroom Instruction)</i>	Tier III Intervention <i>(along with Classroom Instruction)</i>
Making Sense	<ul style="list-style-type: none"> <li>Identifies a ratio in all forms whether in a context or in a model:               <ul style="list-style-type: none"> <li>part-whole,</li> <li>part-part,</li> <li>rate,</li> <li>percent,</li> <li>speed, and</li> <li>measurement conversion.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Is unable to consistently determine a ratio in various forms whether presented in context or in a model:               <ul style="list-style-type: none"> <li>part-whole,</li> <li>part-part,</li> <li>rate,</li> <li>percent,</li> <li>speed, and</li> <li>measurement conversion.</li> </ul> </li> </ul> <p><i>Struggles to differentiate part-part and part-whole information; has difficulty representing percent as a ratio.</i></p>	<ul style="list-style-type: none"> <li>Is unable to determine a ratio presented in any format.</li> </ul> <p><i>May identify the components as two independent entities that do not form a ratio relationship.</i></p>
Creates Representations	<ul style="list-style-type: none"> <li>Represents a ratio presented in a problem situation, using a variety of representations:               <ul style="list-style-type: none"> <li>manipulatives,</li> <li>diagrams,</li> <li>tables,</li> <li>double number lines, and</li> <li>ratios.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Represent a ratio presented in a problem situation, using one or two of the same representations:               <ul style="list-style-type: none"> <li>manipulatives,</li> <li>diagrams,</li> <li>tables,</li> <li>double number lines, and</li> <li>ratios.</li> </ul> </li> </ul> <p><i>Tends to use the same representation repeatedly, whether or not it is the most appropriate representation for the context.</i></p>	<ul style="list-style-type: none"> <li>Cannot represent a ratio presented in a problem situation by using a representation:               <ul style="list-style-type: none"> <li>manipulatives,</li> <li>diagrams,</li> <li>tables,</li> <li>double number lines, and</li> <li>ratios.</li> </ul> </li> </ul> <p><i>Tends to repeat the words, numbers, or diagrams presented in the problem.</i></p>
Use Reliable Strategy	<ul style="list-style-type: none"> <li>Uses a variety of strategies to solve problems involving ratio and rate:               <ul style="list-style-type: none"> <li>iterating or partitioning an initial group using manipulatives,</li> <li>using a diagram or creating a table; and</li> <li>creating equivalent ratios.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Solves problems involving ratio and rate by using the same strategy repeatedly, whether or not it is the most appropriate representation for the context:               <ul style="list-style-type: none"> <li>by iterating or partitioning an initial group using manipulatives,</li> <li>using a diagram,</li> <li>creating a table; and</li> <li>creating equivalent ratios.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Unable to solve problems using correct ratio reasoning.</li> </ul> <p><i>May use additive thinking instead of multiplicative thinking.</i></p>
Provides Explanation	<ul style="list-style-type: none"> <li>Consistently identifies and labels parts, and/or whole, or rate correctly and identifies the meaning of variables used in expressions or equations.</li> </ul>	<ul style="list-style-type: none"> <li>Is able to identify and labels parts, and/or whole, or rate and identifies the meaning of variables used in expressions or equations.</li> </ul> <p><i>May not be able to identify a percent as part of a whole; may not be able to identify the units involved in a rate.</i></p>	<ul style="list-style-type: none"> <li>Does not attach labels or meaning to the numbers or variables involved in a problem situation.</li> </ul>

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**Grade 7 End Year**

Category II	<b>Tier I Intervention</b> <i>(Classroom Instruction)</i>	<b>Tier II Intervention</b> <i>(along with Classroom Instruction)</i>	<b>Tier III Intervention</b> <i>(Classroom Instruction)</i>
<b>Makes Sense</b>	<ul style="list-style-type: none"> <li>Consistently identifies proportional relationships and solves problems involving unit rate, percent, and speed.</li> </ul>	<ul style="list-style-type: none"> <li>Inconsistently identifies proportional relationships and solves problems involving unit rate, percent, and speed.</li> </ul>	<ul style="list-style-type: none"> <li>Unable to identify proportional relationships and cannot solve problems involving unit rate, percent, and speed.</li> </ul>
<b>Creates Representations</b>	<ul style="list-style-type: none"> <li>Recognizes and represents proportional relationships found in tables, graphs or contexts.</li> <li>Uses diagrams, tables, graphs, expressions, or equations when solving problems involving proportional relationships.</li> </ul>	<ul style="list-style-type: none"> <li>Recognizes and represents proportional relationships found in tables, graphs, or contexts.</li> </ul>	<ul style="list-style-type: none"> <li>Cannot recognize or represent proportional relationships found in tables, graphs, or contexts.</li> </ul>
<b>Uses a Reliable Strategy</b>	<ul style="list-style-type: none"> <li>Uses a variety of strategies to solve problems involving ratio and rate:                             <ul style="list-style-type: none"> <li>- forming equivalent ratios,</li> <li>- determining and using unit rate,</li> <li>- creating a table of values,</li> <li>- drawing a graph, and</li> <li>- writing and solving an equation.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Uses a limited number of strategies to solve problems involving ratio and rate:                             <ul style="list-style-type: none"> <li>- forming equivalent ratios and</li> <li>- determining and using unit rate, creating a table of values, drawing a graph, writing, or solving an equation.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Unable to use strategies to solve the problems using proportional reasoning.</li> </ul>
<b>Provides Explanation</b>	<ul style="list-style-type: none"> <li>Correctly identifies and labels ratios, and connects the meaning of numbers and notation to the problem situation.</li> </ul>	<ul style="list-style-type: none"> <li>Inconsistently identifies and labels ratios, and connects the meaning of numbers and notation to the problem situation.</li> </ul>	<ul style="list-style-type: none"> <li>Does not attach labels or meaning to the numbers or variables involved in a problem situation.</li> </ul>

*NOTE: By Grade 8, the expectation is for students to understand ratios and proportional relationships. By grade 8 students are expected to apply what they know about ratios and proportional relationships to work with linear functions (e.g., relating the constant rate of change and unit rate to slope) . Consider this expectation when determining the tier of intervention services that may be needed to support the students beyond Grade 8.*