

## Grade 7 Math C1 TA

<p><b>Claim 1:</b> Concepts and Procedures Students can explain and apply mathematical concepts and carry out mathematical procedures with precision and fluency.</p>	
<p>Content Domain: <b>Ratios and Proportional Relationships</b></p>	
<p><b>Target A [m]:</b> Analyze proportional relationships and use them to solve real-world and mathematical problems. (DOK 1, 2)</p> <p>Tasks for this target will require students to identify and represent proportional relationships in various formats (tables, graphs, equations, diagrams, verbal descriptions) and interpret specific values in context. (See 7.G Target E for possible context.) Other tasks will require students to compute unit rates, including those associated with ratios of fractions.</p> <p>Multistep problems involving ratio and percent will be assessed by tasks in Claims 2 and 4.</p>	
Standards:	7.RP.1, 7.RP.2, 7.RP.3
DOK Target(s):	1, 2
Evidence Required:	<ol style="list-style-type: none"> <li>1. The student identifies proportional relationships between quantities in various formats.</li> <li>2. The student represents proportional relationships between quantities in various formats.</li> <li>3. The student interprets specific values from a proportional relationship in the context of a problem situation.</li> <li>4. The student computes unit rates.</li> </ol>
Allowable Item Types*:	SR, CR
Task Models:	<ol style="list-style-type: none"> <li>1. SR (DOK 1) <b>Prompt Features:</b> The student is prompted to identify two quantities that are in a proportional relationship. <b>Stimulus:</b> The student is presented with pairs of quantities given in tables, or graphs, or equations, or diagrams, or verbal descriptions.</li> <li>1. CR (DOK 1, 2) <b>Prompt Features:</b> The student is prompted to explain whether two quantities are in a proportional relationship. <b>Stimulus:</b> The student is presented with two quantities given in tables, or graphs, or equations, or diagrams, or verbal descriptions.</li> <li>2. SR (DOK 2) <b>Prompt Features:</b> The student is prompted to identify an equation that represents the proportional relationship between two given quantities. Or the student is prompted to identify two quantities that are represented by an equation. <b>Stimulus 1:</b> The student is presented with two quantities in a proportional relationship given in tables, or graphs, or diagrams, or verbal descriptions. <b>Stimulus 2:</b> The student is presented with an equation that</li> </ol>

	<p>represents a proportional relationship.</p> <p>2. CR (DOK 2)  <b>Prompt Features:</b> The student is prompted to write an equation that represents the proportional relationship between two given quantities.  <b>Stimulus:</b> The student is presented with two quantities in a proportional relationship given in tables, or graphs, or diagrams, or verbal descriptions.</p> <p>3. SR (DOK 2)  <b>Prompt Features:</b> The student is prompted to identify the best explanation of what specific values from a proportional relationship mean in the context of a problem situation.  <b>Stimulus:</b> The student is presented with a representation of a proportional relationship where specific values are emphasized. (See 7.G Target E for possible context.)</p> <p>3. CR (DOK 2)  <b>Prompt Features:</b> The student is prompted to explain what specific values from a proportional relationship mean in the context of a problem situation.  <b>Stimulus:</b> The student is presented with a representation of a proportional relationship where specific values are emphasized. (See 7.G Target E for possible context.)</p> <p>4. SR (DOK 1)  <b>Prompt Features:</b> The student is prompted to identify the constant of proportionality (unit rate) of two proportional quantities.  <b>Stimulus:</b> The student is presented with proportional quantities, given in a table, or a graph, or an equation, or a diagram, or a verbal description.</p> <p>4. CR (DOK 2)  <b>Prompt Features:</b> The student is prompted to write the constant of proportionality (unit rate) of two proportional quantities.  <b>Stimulus:</b> The student is presented with proportional quantities given in a table, or a graph, or an equation, or a diagram, or a verbal description.</p>
Allowable Stimulus Materials:	tables, graphs, equations, diagrams
Allowable Disciplinary Vocabulary:	unit rate, constant of proportionality, simple interest, tax, markup, markdown, gratuity, commission, fee, percent increase, percent decrease, percent error
Allowable Tools:	For some items, calculators may be used.
Target-Specific Attributes:	
Key Nontargeted	

## Grade 7 Mathematics Item Specification C1 TA



Constructs:	
Accessibility Concerns:	Blind or low vision students may have difficulty with aspects of this target related to tables and graphs.
Sample Items:	MAT.07.TE.1.000RP.A.287, MAT.07.SR.1.000RP.A.294, MAT.07.SR.1.000RP.A.291, MAT.07.SR.1.000RP.A.290

\*SR = selected response item; CR = constructed response item; TE = technology-enhanced item; ER = extended-response task; PT = performance task