

## 7<sup>th</sup> Grade Module 1 – Ratios and Proportional Relationships

	4 - Mastery	3 - Proficient	2 - Basic	1 - Below Basic	0 - No Evidence
Topic A and B (7.RP.2)	<p>Meets <b>all</b> of the criteria in a Level 3</p> <p><b>Completes tasks including synthesis and evaluation</b></p>	<p><b>Explain</b> whether two quantities are proportional using a table and a graph</p> <p>Identify the constant of proportionality (unit rate) from <b>all</b> of the following: tables, graphs, equations, diagrams and verbal descriptions.</p> <p><b>Write</b> an equation that represents a proportional relationship</p> <p>Explain what <b>all</b> of the following points mean on a graph in terms of the situation: <math>(x,y)</math>, <math>(0,0)</math> and <math>(1,r)</math></p>	<p>Decide whether two quantities are proportional using a table <b>and</b> a graph</p> <p>Identify the constant of proportionality (unit rate) from <b>three</b> of the following: tables, graphs, equations, diagrams and verbal descriptions.</p> <p><b>Identify</b> an equation that represents a proportional relationship</p> <p>Explain what <b>two</b> of the following points mean on a graph in terms of the situation: <math>(x,y)</math>, <math>(0,0)</math> and <math>(1,r)</math></p>	<p>Decide whether two quantities are proportional using a table <b>or</b> graph</p> <p>Identify the constant of proportionality (unit rate) from <b>two</b> of the following: tables, graphs, equations, diagrams and verbal descriptions.</p> <p>Explain what <b>one</b> of the following points mean on a graph in terms of the situation: <math>(x,y)</math>, <math>(0,0)</math> and <math>(1,r)</math></p>	<p><b>Shows no evidence of proficiency</b></p> <p>Little evidence of reasoning or application to solve the problem.</p>
Topic C (7.RP.1 and 7.RP.3)	<p>Meets <b>all</b> of the criteria in a Level 3</p> <p><b>Completes tasks including synthesis and evaluation</b></p>	<p>Compute unit rates associated with ratios of <b>fractions and mixed numbers.</b></p> <p>Use proportional relationships to solve <b>multi-step</b> problems in real-world situations</p>	<p>Compute unit rates associated with ratios consisting of <b>at least one fraction.</b></p> <p>Use proportional relationships to solve problems <b>in real world situations.</b></p>	<p>Computes unit rates associated with ratios without fractions.</p> <p>Use proportional relationships to solve problems.</p>	<p><b>Shows no evidence of proficiency</b></p> <p>Little evidence of reasoning or application to solve the problem.</p>
Topic D (7.RP.2b and 7.G.1)	<p>Meets <b>all</b> of the criteria in a Level 3</p> <p><b>Completes tasks including synthesis and evaluation</b></p>	<p>Determine the scale factor from a problem and solve problems to compute length and <b>area and reproduce a scale drawing using a different scale factor</b></p>	<p>Determine the scale factor from a problem and solve problems to compute length <b>and area</b></p>	<p>Determine the scale factor from a problem and use it to solve problems to <b>compute lengths</b></p>	<p><b>Shows no evidence of proficiency</b></p> <p>Little evidence of reasoning or application to solve the problem.</p>

**7.RP.2** Recognize and represent proportional relationships between quantities.

- a) Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin
- b) Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.
- c) Represent proportional relationships by equations
- d) Explain what a point  $(x, y)$  on the graph of a proportional relationship means in terms of the situation, with special attention to the points  $(0, 0)$  and  $(1, r)$  where  $r$  is the unit rate.

**7.RP.1** Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.

**7.RP.3** Use proportional relationships to solve multi-step ratio and percent problems.

**7.G.1** Solve problems involving scale drawings of geometric figures, including computing actual lengths of areas from a scale drawing and reproducing a scale drawing at a different scale.