

Sample Grade 7 Unit: Proportional Reasoning: Essential Learning Standards

In this example, the standards in the left column present a more formal representation of each essential learning standard, often as seen in state standards. The middle column shows the essential learning standards as a teacher would write them on an assessment in student-friendly, *I can* language. The right column unwraps each standard into daily learning targets for lesson designing and planning.

Formal Unit Standards (Generic state standard language)	Essential Learning Standards for Assessment and Reflection (Student-friendly language)	Daily Learning Targets What students have to <i>know</i> and <i>be able to do</i> (Unwrapped standards)
1. Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.	I can determine unit rates from ratios.	<ul style="list-style-type: none"> • Compute unit rates associated with ratios of fractions in like or different units. <ul style="list-style-type: none"> ▸ Ratios of lengths ▸ Ratios of areas ▸ Ratios of other quantities with like units ▸ Ratios of other quantities with unlike units
2a. Decide whether two quantities are in a proportional relationship, and so on, 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.	I can determine if two quantities are proportional and explain my thinking.	<ul style="list-style-type: none"> • Determine if two quantities are in a proportional relationship by: <ul style="list-style-type: none"> ▸ Testing for equivalent ratios in a table. ▸ Graphing on a coordinate plane to see whether the graph is a straight line through the origin.
2b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. 2c. Represent proportional relationships using equations. 2d. 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.	I can identify the constant of proportionality, write equations for, and explain the meaning of points on a graph for a proportional relationship.	<ul style="list-style-type: none"> • Identify the constant of proportionality (unit rate) in proportional relationships shown in: <ul style="list-style-type: none"> ▸ Tables ▸ Graphs ▸ Equations ▸ Diagrams ▸ Verbal descriptions • Represent proportional relationships using equations (for instance, $y = mx$) • Explain the meaning of a point (x, y) on a graph of a proportional relationship in the given context <ul style="list-style-type: none"> ▸ Include explanation of $(0, 0)$ ▸ Include explanation of $(1, r)$ [r is unit rate]
3. Use proportional relationships to solve multistep ratio and percent problems. (Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error)	I can solve multistep ratio and percent problems.	<ul style="list-style-type: none"> • Use proportional relationships to solve multistep ratio and percent problems. <ul style="list-style-type: none"> ▸ Simple interest ▸ Tax ▸ Markups and markdowns ▸ Gratuities ▸ Commissions ▸ Fees ▸ Percent increase and decrease ▸ Percent error