

Number and Operations

Goal: The learner will understand and compute with rational numbers

Objective:

1.01 Develop and use ratios, proportions, and percents to solve problems.

To achieve this objective, students should:

- Recognize problem situations in which ratios and proportions are appropriate and in which they are not appropriate.
- Understand and use standard ratio notation for expressing ratios (e.g., 3:5, 3 to 5, $\frac{3}{5}$, 60 out of 100 or 60%)
- Understand that a ratio can represent a part-to-part relationship (three boys to five girls) or a part-to-whole relationship (three boys to eight students).
- Recognize and write ratios to describe different situations.
- Use a variety of strategies to solve problems involving proportional reasoning, including build-up strategies, tables, unit rates, percents, equivalent ratios, and simple equations.
- Use percentages to calculate tax, tip, commission, mark-ups, discounts and other real-world contexts.
- Find the percent of change given the original and new amounts, in the context of a real-world problem.
- Given the new amount and the percent of change, find the original amount, in the context of a real-world problem
- Use unit conversion ratios to find equivalent measurements (English to English and Metric to Metric)