# Grade 8 - Unit 5 Percent, Ratio, and Rate

**N04**    Students will be expected to demonstrate an understanding of ratio and rate.

**Performance Indicators**
**N04.01**    Explain the multiplicative relationship found within a ratio.
**N04.02**    Represent a two-term ratio from a given context concretely and pictorially and record using the forms 3:5 or 3 to 5.
**N04.03**    Express a three-term ratio from a given context in the forms 4:7:3 or 4 to 7 to 3.
**N04.04**    Express a part-to-part ratio as a part-to-whole fraction.
**N04.05**    Identify and describe ratios and rates (including unit rates) from real-life examples and record them symbolically.
**N04.06**    Express a given rate using words or symbols.
**N04.07**    Express a given ratio as a percent, and explain why a rate cannot be represented as a percent.

| Limited | Developing | Competent | In-Depth |
|---|---|---|---|
| Student can create ratios that are equivalent using concrete materials or pictures. | Student can tell the difference between a multiplicative and an additive relationship using examples. | Student can explain the multiplicative relationship found within a ratio. | |
| Student can find multiples and factors of whole numbers. | Student can represent ratios from a given context concretely and pictorially. | Student can represent a two-term or three-term ratio from a given context concretely and pictorially and record using the forms 3:5 or 3 to 5 for two-term ratios and 4:7:3 or 4 to 7 to 3 for three-term ratios. | Student can create contexts to explain and represent two and three term ratios. |
| Student can create an equivalent fraction for a given fraction. | Student can express a part-to-whole ratio as a part-to-whole fraction. | Student can express a part-to-part ratio as a part-to-whole fraction. | |
| | | Student can identify and describe ratio and rates (including unit rates) from real-life examples and record them symbolically. | Student can create real-life examples and non-examples of both ratios and rates. |
| | Student can identify the units that a ratio is comparing and determine if they are the same or different. | Student can express a given rate using words or symbols and a given ratio as a percent and explain why a rate cannot be represented as a percent. | |