

Standards Chart: Designing RATIOnally

Grades 6–8

| Common Core State Standards for Mathematical Content Ratios & Proportional Relationships | Lesson | Online Tool | Activity Sheet 1: A Fresh, Clean Design | Activity Sheet 2: A First-Rate Design | Activity Sheet 3: Keeping It All in Proportion |
|--|--------|-------------|---|---------------------------------------|--|
| Grade 6: 6.RP.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. | X | X | X | X | X |
| Grade 6: 6.RP.A.2 Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. | X | X | X | X | X |
| Grade 6: 6.RP.A.3 Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. | X | X | X | X | X |
| Grade 7: 7.RP.A.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. | X | X | | X | X |
| Grade 7: 7.RP.A.2 Recognize and represent proportional relationships between quantities. | X | X | X | X | X |
| Grade 7: 7.RP.A.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. | X | X | | | X |

(continued)

| Common Core State Standards for Mathematical Practice | Lesson | Online Tool | Activity Sheet 1: A Fresh, Clean Design | Activity Sheet 2: A First-Rate Design | Activity Sheet 3: Keeping It All in Proportion |
|---|--------|-------------|---|---------------------------------------|--|
| MP1. Make sense of problems and persevere in solving them. | X | X | X | X | X |
| MP2. Reason abstractly and quantitatively. | X | X | X | X | X |
| MP3. Construct viable arguments and critique the reasoning of others. | X | X | | X | |
| MP4. Model with mathematics. | X | X | | | |
| MP5. Use appropriate tools strategically. | X | X | | | |
| MP6. Attend to precision. | X | X | X | X | X |
| National Council of Teachers of Mathematics (NCTM) Standards Number and Operations | | | | | |
| Grades 6–8: Work flexibly with fractions, decimals, and percents to solve problems. | X | X | X | X | X |
| Grades 6–8: Understand and use ratios and proportions to represent quantitative relationships. | X | X | X | X | X |

SOURCES: Common Core State Standards (CCSS) for Mathematics: corestandards.org/Math

National Council of Teachers of Mathematics (NCTM) Standards: nctm.org/standards