**17-18 JMS Lesson Plan**

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| **Teacher:** | Lori Holbert | **Subject:** | | Math – Unit 3 Ratios and Proportional Relationships\* | | |
| **Date:** | Quarter 3: 4-5 weeks (started before Holidays) | **Grade:** | | 7 | | |
| **I Can…** | * Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. (Compute the unit rate as the **complex fraction** (1/2)/ (1/4) miles per hour, equivalently 2 miles per hour.) * Decide whether two quantities are in a proportional relationship by 1) testing for equivalent ratios in a table or 2) graphing on a coordinate plane and observing whether the graph is a **straight line through the origin.** * Identify the **constant of proportionality** (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. | **I Can…** | | * Represent proportional relationships by equations. * 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. * Use proportional relationships to solve multistep ratio and percent problems. (simple interest, tax, markups and markdowns, gratuities, commissions, and fees) | | |
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| **Standard(s):** | **MGSE7.RP.1 MGSE7.RP.2.a-d MGSE7.RP.3 MGSE7.G.1**  Constant of Proportionality • Equivalent Fractions• Fraction • Multiplicative inverse • Percent rate of change • Proportion • Ratio • Similar Figures • Unit Rate • Scale factor | | | | | |
| **Teacher Notes:** | \*corresponds to lessons from Holt Modules 7 and 9 | |  | | | |
| **DOK Level** | **Activities / Assignments / Questions** | | | | **Assessment** | |
| **­**  **REMEDIATION** | * number sense * computation with whole numbers and decimals, including application of order of op. * knowledge of equivalent fractions * addition and subtraction of common fractions with like denominators * recognize equivalency of fractions, decimals, and percents | | | | Formative  Summative | Selected Response  Constructed Response  Verbal  Rubric  Other – Teacher observation/checklist |
| **2** | * Calculate and compare unit rates (including complex fractions) * Identify equivalent rates and proportions (direct proportions) using **tables, graphs, diagrams, or equations** * Solve proportions using cross products * Determine direct variation and the constant of variation using y=kx * Calculate percent of change (increase or decrease) | | | | Formative  Summative | Selected Response  Constructed Response  Verbal  Rubric  Other – Teacher observation/checklist |
| **3** | * Formulate proportions in real world problems; justify thinking * Interpret solutions to proportions in real world problems including problems involving unit rates and percents (saving money?) * Interpret solutions to percent of change problems * Differentiate between possible real world scenarios involving interest, commissions, etc. (which is the better deal; who makes more?) | | | | Formative  Summative | Selected Response  Constructed Response  Essay  Verbal  Rubric  Other – Teacher observation/checklist |
| **4** | * Complete items from Ratios and Proportional Relationships Choice Board as appropriate (poster, game, letter, paragraph, story problems, quiz, PowerPoint,   rap/rhyme, page)   * Complete GADOE tasks as appropriate | | | | Formative  Summative | Selected Response  Constructed Response  Essay  Verbal  Rubric  Other – Teacher observation/checklist |
| **Summarizing**  **Activities:** | Ticket out the Door  Thumbs Up / Thumbs Down  Teacher Questions/Checklist  Quizzes  Tests  Tasks | | | | | |
| **Resources:** | Center/station activities/games  Outstanding Math Guide foldables  Interactive Math Notebook: class notes, examples, other foldables  IPAD – Apps / Kahoot  Math in the Fast Lane: mathinfastlane.com  Holt online resources (\***differentiated review worksheets**, **quizzes, and tests**): <http://my.hrw.com/>  Khan Academy videos: <https://www.khanacademy.org/math/cc-seventh-grade-math>  Study Jams interactive lessons: <http://studyjams.scholastic.com/studyjams/jams/math/index.htm>  BrainPop videos: <https://www.brainpop.com/math/>  MobyMax lessons: <https://www.mobymax.com/signin>  Virtual Nerd videos: <http://www.virtualnerd.com/>  PARCC practice Items: <https://prc.parcconline.org/assessments/parcc-released-items>  USA Test Prep: <http://www.usatestprep.com/member-login>  Tarver Academy: http://www.tarveracademy.com/  IXL: <https://www.ixl.com/> | | | | | |
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