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| **Standards-Based Lesson** | | | | **Monday August 26 – Friday, September 13** | | |
| **Math 8** | | | | | | |
| Teacher: Elliott | | Unit 5: Linear Functions | | | | |
| **STANDARDS – CCGPS** | | | | | | |
| **Understand the connections between proportional relationships, lines, and linear equations.**  MCC8.EE.5  Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.  MCC8.EE.6  Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y = mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at b  .  **Define, evaluate, and compare functions.**  MCC8.F.3  Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. | | | | | | |
| **OBJECTIVES: Students will know… or Students will be able to…** | | | | | | |
| * graph proportional relationships; * interpret unit rate as the slope; * compare two different proportional relationships represented in different ways; * use similar triangles to explain why the slope is the same between any two points on a non-vertical line; * derive the equation y = mx for a line through the origin; * derive the equation y = mx + b for a line intercepting the vertical axis at b; * interpret equations in y = mx + bform as linear functions. | | | | | | |
| **ESSENTIAL QUESTIONS** | | | | | | |
| * What is a function? * What are the characteristics of a function? * How do you determine if relations are functions? * How is a function different from a relation? * Why is it important to know which variable is the independent variable? * How can a function be recognized in any form? * What is the best way to represent a function? * How do you represent relations and functions using tables, graphs, words, and algebraic equations? * What strategies can I use to identify patterns? * How does looking at patterns relate to functions? * How are sets of numbers related to each other? * How can you use functions to model real-world situations? * How can graphs and equations of functions help us to interpret real-world problems? | | | | | | |
| **VOCABULARY** | | | | | | |
| * Domain * Range * Function * Graph * X coordinate * Y coordinate * Coordinate plane * Intersecting lines * Origin * Proportional relationships * Slope | | | | | | |
| **PRE-ASSESSMENT** | | | | | | |
| * Unit 5 Pre-Assessment | | | | | | |
| **PRIOR TO ACTIVATION (CRCT/EOCT PRACTICE)** | | | | | | |
| **Bell Ringer -**   * Students complete questions independently * Have students compare answers and work with their table buddies. * Assist students as needed. * Review Bell Ringer   **Sources:**   * [Holt (7th Grade and 8th Grade) CRCT Countdown](file:///C:\Users\noreen.elliott\Documents\2013-2014%20Coordinate%20Algebra\Math%207\countdown_to_crct.doc) * Wach (7th Grade and 8th Grade) Warm-ups | | | | | | |
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|  | **Activate (front screen)** | | **Instruction** | | **Practice/Application** | **Assignment** |
| **Mon 8/26** | Walch Warm-up 7th Grade  Pre-assessment Unit 4 | | Review function material from Unit 4  GA DOE Task: By the Book – interpret word problem | | GA DOE Task: By the Book – work on task in small groups | GA DOE Task: By the Book –finish as homework |
| **Tues 8/27** | Walch Warm-up 7th Grade  Review previous day’s material | | Functions  Holt 13-4 Videos  Holt 13-4 Powerpoint | | Holt 13.4 Practice A | Holt 13.4 Practice B  Holt 13.4 Problem solving |
| **Wed 8/28** | Walch Warm-up 7th Grade  Review previous day’s material | | Slope of a line  Holt 12.2 Videos  Holt 12.2 Powerpoint | | Holt 12.2 Practice A | Holt 12.2 Practice B  Holt 12.2 Problem Solving |
| **Thu 8/29** | Walch Warm-up 7th Grade  Review previous day’s material | | Using Slopes and Intercepts  Holt 12.3 videos  Holt 12.3 Powerpoint | | Holt 12.3 Practice A | Holt 12.3 Practice B  Holt 12.3 Problem Solving |
| **Fri 8/30** | Walch Warm-up 7th Grade  Review previous day’s material | | Proportions  Holt 5.1 Videos  Holt 5.1 Powerpoint | | Holt 5.1 Practice A | Holt 5.1 Practice B  Holt 5.1 Problem solving |
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| **Mon 9/2** | HOLDAY  NO SCHOOL | |  | |  |  |
| **Tue 9/3** | Walch Warm-up 7th Grade  Review previous day’s material | | Ratios, Rates, and Unit Rates  Holt 5.2 Videos  Holt 5.2 Powerpoint | | Holt 5.2 Practice A | Holt 5.2 Practice B  Holt 5.2 Problem solving |
| **Wed 9/4** | Walch Warm-up 7th Grade  Review previous day’s material | | Direct Variation  Holt 5.3 Videos  Holt 5.3 Powerpoint | | Holt 5.3 Practice A | Explorations in Common Core Math B – pages 225-228  GA DOE What’s my line? |
| **Thu 9/5** | Walch Warm-up 7th Grade  Review previous day’s material | | Point Slope Form  Holt 12.4 Videos  Holt 12.4 Powerpoint | | Holt 12.4 Practice A | Holt 12.4 Practice B  Holt 12.4 Problem Solving |
| **Fri 9/6** | Walch Warm-up 7th Grade  Review previous day’s material  Quiz | |  | | Review  Explorations in Common Core Math B – pages 197-198, 205-206 |  |
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| **Mon 9/9** | Walch Warm-up 7th Grade  Review previous day’s material | |  | | Review  Explorations in Common Core Math B – pages 207-212 |  |
| **Tue 9/10** | Walch Warm-up 7th Grade  Review previous day’s material | |  | | Review  Explorations in Common Core Math B – pages 213-220 |  |
| **Wed 9/11** | Walch Warm-up 7th Grade  Review previous day’s material | |  | | Review  Explorations in Common Core Math B – pages 221-224 |  |
| **Thu 9/12** | Walch Warm-up 7th Gradeial  Review previous day’s mater | |  | | Review  Explorations in Common Core Math B – pages 229-236 |  |
| **Fri 9/13** | Walch Warm-up 7th Gradeial  Review previous day’s mater | |  | | TEST Unit 5 |  |
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| **DIFFERENTIATED INSTRUCTION** | | | | | | |
| Specific accommodations: (as specified in IEPs).  All periods:  Students with 90+ averages and demonstration of excellent work habits and motivation have the option of being in a “blended” segment of this class. All presentations, practice problems, etc. are on the web site. They may go to the media center or computer lab to work on the course. Students may also stay in class when they need additional support. This enables the instructor to work more closely with the other students and enables the “blended” students to be more challenged than they would be in the regular classroom. Current students taking the option: | | | | | | |
| **ASSESSMENT/EVALUATION** | | | | | | |
| * Observation, questioning of students while they are working * Completion of guided practice activity * Homework quizzes | | | | | | |
| **CLOSURE** | | | | | | |
| * Review day’s concepts and vocabulary * Remind students to review their unit notes | | | | | | |