

Lesson Title: Golden Ratio Graphing
Unit: Proportions
Grade Level: 6 th Grade
Estimated time requirement: 1 class period
Summary (25-50 words): Students will be combining their results from the Most Beautiful Rectangle survey to form a class graph. We will use a TI 73 calculator to make the class graph.
Objectives:
<ul style="list-style-type: none"> • Students will construct a graph that combines the class survey information. • Students will determine if the most beautiful rectangle is the golden rectangle.
Texas Essential Knowledge and Skills:
1B, 3A, 3B, 3C, 4A, 10A, 10D, 12A
Assessment:
<ul style="list-style-type: none"> • Successful completion of a class graph and hand out.
Materials:
<ul style="list-style-type: none"> • The Most Beautiful Rectangle survey results • TI 73 calculator • Document camera and Tandberg system
Resources:
<ul style="list-style-type: none"> • Garland, Trudi Hammel. <u>Fascinating Fibonacci's Mystery and Magic in Numbers</u>: Dale Seymour Publication, 1987. • http://www.goldennumber.net/ • Garland, Trudi Hammel. <u>Fibonacci Fun Fascinating Activities with Intriguing Numbers</u>: Dale Seymour Publication, 1997.
Procedures:
<p>Students will share the results of their Most Beautiful Rectangle survey. As a class we will total the results for each rectangle A-E and put them in a table showing the survey information as a frequency, fraction, decimal and percent. Students can use a TI-73 calculator to convert the frequencies into fractions, decimals and percents. After completing the table, students will use a TI-73 graphing calculator to make a bar graph and a circle graph showing the class results for the survey. The steps for using the TI-73 calculator to convert the fractions to decimals and make a bar graph and circle graph are shown on the TI73 instructions hand out. The document camera will be used to show the students how to use the TI 73 to graph the information. The teacher can show each key stroke with the document camera. Upon completing the graph, students will discuss if rectangle D (the golden rectangle) was more pleasing to the eye.</p> <p>As a final activity, students will complete the “In Search of the Golden Rectangle” hand out. In this hand out students will use their knowledge of the golden proportion to find the missing measurement in each situation.</p>
Technology Infusion:
<ul style="list-style-type: none"> • TI 73 calculator • Document camera and Tandberg system

Family Connection: The family helped in the Most Beautiful Rectangle survey.

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