

The Golden Ratio

Summary

This unit introduces the students to ratios. The students will use the "Golden Ratio" (1.618) to experience how to set up and work with ratios. Graphing calculators and spreadsheets will also be used to set up ratios.

Time Frame

7 class periods of 45 minutes each

Group Size

Small Groups

Materials

Prentice Hall Middle Grades Math Book 2, sample spreadsheet, spreadsheet worksheet, Go for the Gold worksheet from Texas Instruments Exploration book (due to copyright, you will need to purchase a copy of this book to use in your classroom - Activity 7), ratio test, spreadsheet rubric, graphing calculators, spreadsheet software, and the attached lesson plan.

Student Prior Knowledge

Students need to already know how to work with fractions and how to change fractions to decimals and vice versa.

Intended Learning Outcomes

When this unit is completed, student should know what a ratio is. They should be able to set up a ratio when given a story problem. Students should also know and be able to explain what the "Golden Ratio" is.

Instructional Procedures

See the attached lesson plans.

Strategies for Diverse Learners

To adapt this lesson for diverse learners have students work in groups instead of individually. Set up heterogeneous groups ahead of time that represent all types of learners are mixed up in the groups and can help each other.

Extensions

See day 3 on the attached lesson plan.

Assessment Plan

Assess the students' knowledge of ratios by using the attached ratio test. Assess the students' knowledge of spreadsheets by filling out the attached rubric while the students are working with this tool.

Bibliography

Middle Grades Math Tools for Success: Course 2, Prentice Hall, 1999 Explorations: Discovering Mathematics with the TI-73: Activities for Grades 7 and 8, Texas Instruments, 1998

Authors

[CHANTEL COWAN](#)