The American Flag - Basic Ratios and Proportions

Lesson Plan

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<u>Goal:</u> To explain what ratios and proportions are, and to show their use in a real life situation (with the American flag).

Grade and Course: 9th grade - Algebra I

KY Standards: MA-HS.1.4.1, MA-HS.5.2.1, MA-HS.5.3.1

Objectives: Students should learn what a ratio is, and what it is useful for. They should also learn how to setup their own proportions, which they can solve for desired information.

Resources/materials needed: Computer with projector, worksheet that follows the slides.

<u>Description of Plan:</u> Basically we just go through the slideshow. We will briefly discuss what a ratio is, and the various correct ways to read/write a ratio. This leads us to having the students try reducing ratios and deciding if two ratios are equivalent. Finally we teach the students to setup and solve a proportion.

<u>Lesson Source:</u> Original lesson.

Instructional Mode: Powerpoint presentation.

<u>Date Given:</u> 11/13/2008 <u>Estimated Time:</u> One class period

Date Submitted to Algebra³: 02/09/2009

Go to: http://www.ms.uky.edu/~cmatting

Click on: "Lesson 2 – Ratios and Proportions"

- 1. What is the correct ratio of width to height for an American flag? ______
- 2. Give one ratio which is equivalent (the same as) to this one: ______
- 3. Give one ratio which is not equivalent to the correct one:
- 4. Find a ratio of width to height for each flag below.
- 5. Which is the *correctly* proportioned flag? (A, B, or C) _____

Ratio A:

Ratio B:

Ratio C:



A: 4 in by 2.8 in

6. What is a proportion?



B: 4 in by 2.28 in



C: 4 in by 2.1 in

7. If I want to make a flag which is 25 feet wide, and has the correct width to height ratio, how tall should the flag be?

8. If I want to paint an American flag that is 8 feet tall, how wide should I make my flag?