The American Flag - Basic Ratios and Proportions

Lesson Plan

**Cube Fellow:** Chris Mattingly  
**Teacher Mentor:** Lisa Osborne

**Goal:** 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.

**Description of Plan:** 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.

**Lesson Source:** Original lesson.

**Instructional Mode:** Powerpoint presentation.

**Date Given:** 11/13/2008  
**Estimated Time:** One class period

**Date Submitted to Algebra:** 02/09/2009
Ratio and Proportions Lesson

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  B: 4 in by 2.28 in  C: 4 in by 2.1 in

6. What is a proportion?

______________________________________________________________________________

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?