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Curriculum Units by Fellows of the National Initiative

2007 Volume VI: Keeping the Meaning in Mathematics: The Craft of Word Problems

The Art of Solving Word Problems by Using Proportions

Guide for Curriculum Unit 07.06.08, published September 2007

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The Art of Solving Word Problems by Using Proportions focuses on the struggles that multi-level students face preparing to correctly solve a word problem. In the North Carolina curriculum, a major objective in seventh grade math is solving problems by using proportions. In this unit, my main focus is on word problems that involve unit rates, percents and similar figures/models. Most students at varying levels struggle with setting up a proportion when given a word problem. Students tend to have the knowledge to solve proportions by cross multiplying, but their application is sometimes faulty. This unit assists this issue by breaking down the problems into different difficulty levels and subject matter. Included in the unit, there are also lessons, activities and sample problems that involve real life situations to help students further grasp the concept. It also emphasizes repetition of the basics by completing several problems that contain the same scenario yet have a changing variable. The unit I have written will give students a better understanding and higher confidence level of a major objective and help them to be more successful.

(Developed for Mathematics, grade 7; recommended for Mathematics Proportions and Science Proportions, grade 7)

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