Chapter 5 ~ Proportional Relationships and Ratios, Proportions, and Similarity

Grade Level Indicators (*Power Indicators):

G #1 Use proportional reasoning to describe and express relationships between parts and attributes of similar and congruent figures (Conceptual Knowledge/Analyze)

    **- I can find side lengths of similar shapes using proportions.
    **- I can find angles by comparing similar shapes.
    -I can find missing side lengths and angles in congruent figures.
    - I can determine if two triangles are congruent.
    - I can use proportions and basic knowledge to find missing angles and side length in similar and congruent triangles
    - I can use scale factors to change side lengths in figures.

M #4 Solve problems involving proportional relationships and scale factors; e.g., scale models that require unit conversions within the same measurement system. (Metacognitive/Apply)

    **- I can solve problems using proportions.
    **- I can solve problems using concepts of scale.
    - I can use a proportion to convert units within the same family.

Big Ideas:

Ratios and proportions are tools to solve problems involving the comparison of shapes and quantities.

Knowing the properties of similar and congruent two-dimensional shapes can help us find missing side lengths and angle measures.

Essential Questions:

How can we use ratios and proportions to solve problems?

What are the properties of two-dimensional shapes? What is the missing side length? What is the missing angle measure?

How will we share these with the students?
- Post the big idea on the chalkboard
- Post "I can" statements on front/side board until test is given.

- Check off "I can" statements as we teach each lesson.

FUTURE PLAN
*Change "I can statements" to before to after test checks.
*Copy Big Ideas on ledger paper.
*Chunk "I can statements" on student handout by Big Ideas.

Assessments

Formative:
Problem of the Day
Exit Slips
White Boards
Problem Check with Feedback (5-8 questions)
Formative Quiz Once or Twice During Chapter to Determine Who Needs More Help

Follow Up Techniques:
Classroom Split – Individualized Review
Star Review Sessions with Peer Tutors from Higher Level Math Course

Summative:
Proportion Dolls (End of Year)
Day in the Life (End of the Year)
Manor Map (End of the Year)
Study Island (Spiral During Year)
Mid-chapter Quiz
Final Test

Instruction and Student Activities
SMARTBoards
Online Book Interactivities
Worksheets (Common Worksheets Across Department)
Homework
Brain POP
OAT Review Packets