

9-1-2009

# Grades 7-8 Solving Equations

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# Architect

# Project



**Joseph Kalata**

Dr. Wiener  
5/5/09

## UNIT PLAN TEMPLATE – Backwards Design Model

### Stage 1: Identify Desired Results

Course: Integrated Algebra

Unit Title: Solving Equations

Time Required for Unit: 14 days

What overarching understandings are desired?

Math is a tool  
Visual representation can clarify math  
Mathematical operations help us reach solutions



What will students understand as a Result of this unit? (unit EU's)  
(unit

Students will understand how they relate with data.  
Students will be able to find a single answer from multiple methods of algebra.  
Students will use visual representation to illustrate a system of equations.  
Students will understand the concept that similar figures may have different sizes

What are the overarching essential questions?

How can we use math as a tool?  
How does visual representation clarify math?  
How does mathematical operations help reach solutions?



What “essential” and “unit” questions will focus this unit?  
EQ's)

How do we relate to data?  
Must we always have answers?  
Can multiple answers exist?  
How do we represent data visually?  
Will multiple methods of solving equations lead to the same answers?  
How do we stay similar with different dimensions?

Targeted NY State standards and performance indicators for this unit:

- Students use mathematical reasoning to analyze mathematical situations, make conjectures, gather evidence, and construct an argument.
- Students use number sense and numeration to develop an understanding of the multiple uses of numbers in the real world, the use of numbers to communicate mathematically, and the use of numbers in the development of mathematical ideas.
- Students use mathematical operations and relationships among them to understand mathematics.
- Students use mathematical modeling/multiple representation to provide a means of presenting, interpreting, communicating, and connecting mathematical information and relationships.
- Students use patterns and functions to develop mathematical power, appreciate the true beauty of mathematics, and construct generalizations that describe patterns simply and efficiently.

## DETERMINE ACCEPTABLE EVIDENCE

### Stage 2: Determine Acceptable Evidence

What evidence will show that students understand: there are provable truths in math, visual representation clarifies math, math is a language, and math can be used as a tool.

Performance Tasks, Projects (indicate the culminating or end-unit assignment with \*)

Project: 50 points

- 6 groups – 3 members in each group
- Create either a Brochure, Scaled Model, or a Blue Print of a selected house, and present the data through a skit, video, drawing, song, jingle, or another method approved by the teacher

Quizzes, Tests, Academic Prompts (indicate if any are culminating for unit with \*)

Quiz – Day 5 – 40 points

- Solving an equation graphically
- Checking answers

Test – Day 12 – 50 points

- Substitution, Graphing, Elimination, Checking

Other Evidence (e.g., observations, work samples, dialogues)

Group work during projects

Homework check every day

Quiz, Test, and Project Assessments

Opportunities for Student Self-Assessment

Homework check each day

Closure questions

Going over test

Students self assessment from project

Peer assessment for project

Tiered by: Ability Level

Low Group: Provided room numbers, provided formulas, only 1 – 2 bedroom house

Average Group: At least 2 bedrooms, 1 bathroom, research on areas home pricing

High Group: 4 bedroom, 2 bathroom house needs to be subdivided into a 2 family house.

Day Scheduling:

Day 1 – Solving two-step equations

Day 2 – Solving Multi-step equations

Day 3 – Equations with variables on both sides

Day 4 – Equations with variables on both sides work day

Day 5 – Quiz

Day 6 – Ratio Expressions

Day 6 – Ratio Expressions Work Day

Day 7 – Proportions

Day 8 – Proportions Project Explained and begun

Day 9 – Work day on project

Day 10 – Presentations of project

Day 11 – Presentations continued

Day 12 – Distance Traveled

Day 13 – Review

Day 14 – Test

## Pre-Assessment

### Multiple Choice

*Identify the choice that best completes the statement or answers the question.*

- \_\_\_\_\_ 1 The percent of change in two numbers is \_\_\_\_\_ greater than 100%.  
1) always                                      2) sometimes                                      3) never

### Short Answer

- 2 Find the unit rate for number of parts manufactured per hour if 1630 parts are made in 6 hours.  
Round to the nearest integer.
- 3 A 16-oz bottle of water costs \$1.44. What is the cost per ounce?
- 4 Write the conversion factor for converting meters to centimeters.

**Solve the proportion.**

5  $\frac{2}{10} = \frac{11}{x}$

6  $\frac{x-8}{5} = \frac{2}{4}$

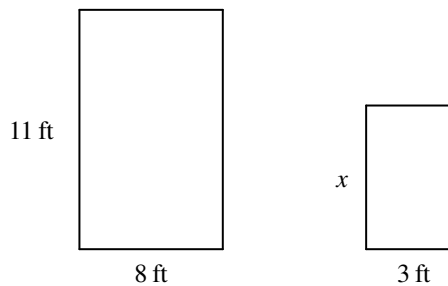
7  $\frac{w + 14}{4w + 6} = \frac{3}{4}$

- 8 A van travels 220 miles on 10 gallons of gas. Write and solve a function to find how many gallons the van needs to travel 550 miles.

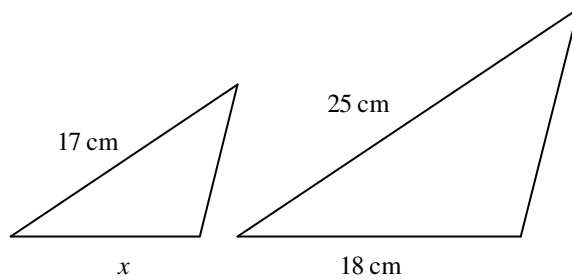
- 9 School guidelines require that there must be at least 2 chaperones for every 25 students going on a school trip. How many chaperones must there be for 80 students?

**The pair of figures is similar. Find  $x$ . Round to the nearest tenth if necessary.**

10

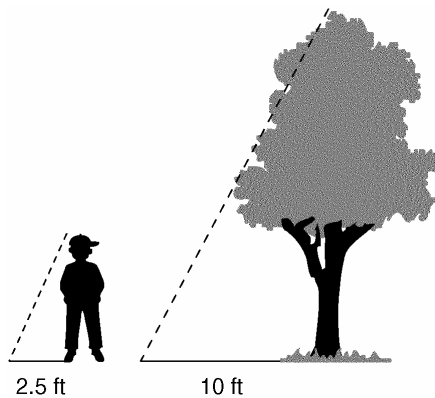


Drawing not to scale



Drawing not to scale

- 12 A tree casts a shadow 10 ft long. A boy standing next to the tree casts a shadow 2.5 ft. long. The triangle shown for the tree and its shadow is similar to the triangle shown for the boy and his shadow. If the boy is 5 ft. tall, how tall is the tree?



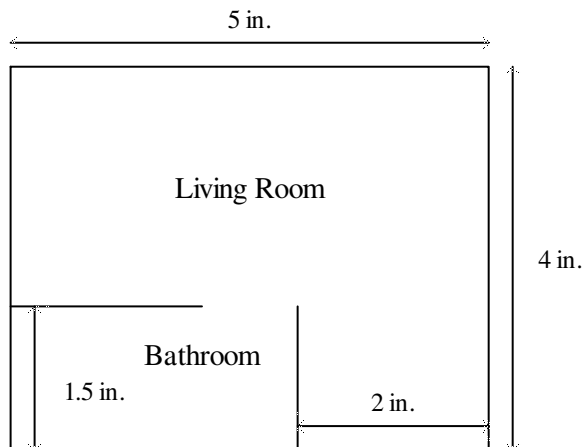
Drawing not to scale

- 13 During the month of February, Fabulous Feet Shoe Mart sold 50 pairs of red loafers. After an ad campaign to boost sales, they sold 60 pairs in March. Find the percent of increase in sales.



## Essay

- 14 A 1-in. length on the blueprint corresponds to an actual length of 3 ft.



- What is the scale of the blueprint?
- What are the actual dimensions of the bathroom?
- What is the actual area of the bathroom?
- What is the actual area of the living room?

## Become the Architect

Role: You and one to two other colleagues have decided to become entrepreneurs and take an existing modular home and modify its dimensions, layout, shape, etc. all to resell to a new customer.

Audience: Your audience is the general home buyers market. Make sure you choose the correct locations and property types for your home.

Format: You will choose from one of the three different projects. You can create a blueprint, a brochure, or a scaled model. Each project has different requirements with different rubrics. Choose the project you feel most comfortable performing.

Topic: The topic(s) included are: similar figures, proportions, area, multiplication principle, compound area, and technology.

*Good Luck and Have Fun!*

# Blue Print Project - AA

Your job:

1. Find a modular home that is at least two bedrooms with one bath – print home with dimensions
2. Find a new lot for the home and scale the home larger or smaller by at least a tenth with units clearly indicated with units clearly indicated
3. Create a blueprint illustrating all the new measurements of the new home
  - a. move rooms around
  - b. change layout
  - c. Be Creative!
4. Given the square feet is 100per sq ft. Find the total cost of the home with the plot of land.
5. Create an advertisement
  - a. The following piece needs to address 5 new mathematical changes in dimensions or pricing or a combination of both. It needs to be original and creative with all ideas of the project involved. (Choose one of the following to complete)
    - i. Create a jingle for selling the home/advertising the home with dimensions
    - ii. Write a commercial dialogue for selling the house with the new features/dimensions
    - iii. Video tape a commercial for the new home
    - iv. Draw an ad for the PennySaver
    - v. Act out a skit between a buyer and seller of the new home
    - vi. Other ideas must be submitted and approved by the teacher
6. Create a poster with all information including blueprint, old and new dimensions of the walls (recommend you use excel), total areas, total price.
7. Show proof of all material you used
8. Credit all the sources you referred to

Here are a few links to help you along:

Modular Homes

<http://www.the-homestore.com/floorplans/search/oneStories>

<http://www.modularhomeplace.com/>

<http://www.ritz-craft.com/>

Property Search

<http://www.uspropertyadvertiser.com/>

<http://www.homes.com/>

Math - Problem Solving : Blue Print Model

Teacher Name: **Mr. Kalata**

Student Name: \_\_\_\_\_

CATEGORY	10	6 – 9	3 – 6	0 – 3
Research	All research of the new lot and modular home are provided.	Some of the projects lot and modular home data are provided.	Either the lot or the modular home data are provided.	None of the information is provided.
Mathematical Errors	90-100% of the steps and solutions have no mathematical errors.	Almost all (85-89%) of the steps and solutions have no mathematical errors.	Most (75-84%) of the steps and solutions have no mathematical errors.	More than 75% of the steps and solutions have mathematical errors.
Mathematical Reasoning	Uses complex and refined mathematical reasoning.	Uses effective mathematical reasoning	Some evidence of mathematical reasoning.	Little evidence of mathematical reasoning.
Mathematical Terminology and Notation	Correct terminology and notation are always used, making it easy to understand what was done.	Correct terminology and notation are usually used, making it fairly easy to understand what was done.	Correct terminology and notation are used, but it is sometimes not easy to understand what was done.	There is little use, or a lot of inappropriate use, of terminology and notation.
Creative Piece	At least 5 mathematical dimensions/pricing are mentioned. The creative piece is at least 3 minutes long.	At least 4 mathematical dimensions/pricing are mentioned. The creative piece is at least 3 minutes long.	The required number of mathematical dimensions is not met, or the creative piece is not the required length.	Less than 4 mathematical dimensions/pricing are not met and the creative piece is not the required length.

Total Points \_\_\_\_\_ / 50

# Brochure Project - AB

Your job:

1. Find a modular home that is at least two bedrooms with one bath – print home with dimensions
2. Find a new lot for the home and scale the home larger or smaller by at least a tenth with units clearly indicated
  - a. Create a three fold brochure for people interested in buying this type of new home
  - b. Show all dimensions of the original home with the scaled dimensions of the new home for comparison
  - c. Given the square feet is 100per sq ft. Find the break down of the cost per room for the new house along with the old house
  - d. Include: Pictures, Data, Charts, Floor Sketch with dimensions...
  - e. Be Creative!
3. Create an advertisement
  - a. The following piece needs to address 5 new mathematical changes in dimensions or pricing or a combination of both. It needs to be original and creative with all ideas of the project involved. (Choose one of the following to complete)
    - i. Create a jingle for selling the home/advertising the home with dimensions
    - ii. Write a commercial dialogue for selling the house with the new features/dimensions
    - iii. Video tape a commercial for the new home
    - iv. Draw an ad for the PennySaver
    - v. Act out a skit between a buyer and seller of the new home
    - vi. Other ideas must be submitted and approved by the teacher
4. Show proof of all material you used
5. Credit all the sources you referred to

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<http://www.homes.com/>

Math - Problem Solving : Brochure Model

Teacher Name: **Mr. Kalata**

Student Name: \_\_\_\_\_

CATEGORY	10	6 – 9	3 – 6	0 – 3
Research	All research of the new lot and modular home are provided.	Some of the projects lot and modular home data are provided.	Either the lot or the modular home data are provided.	None of the information is provided.
Mathematical Errors	90-100% of the steps and solutions have no mathematical errors.	Almost all (85-89%) of the steps and solutions have no mathematical errors.	Most (75-84%) of the steps and solutions have no mathematical errors.	More than 75% of the steps and solutions have mathematical errors.
Mathematical Reasoning	Uses complex and refined mathematical reasoning.	Uses effective mathematical reasoning	Some evidence of mathematical reasoning.	Little evidence of mathematical reasoning.
Mathematical Terminology and Notation	Correct terminology and notation are always used, making it easy to understand what was done.	Correct terminology and notation are usually used, making it fairly easy to understand what was done.	Correct terminology and notation are used, but it is sometimes not easy to understand what was done.	There is little use, or a lot of inappropriate use, of terminology and notation.
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# Scaled Model - AC

Your job:

1. Find a modular home that is at least two bedrooms with one bath – print home with dimensions
2. Find a new lot for the home and scale the home larger or smaller by at least a tenth with units clearly indicated
3. Create a three fold brochure for people interested in buying this type of new home
4. Show all dimensions of the original home with the scaled dimensions of the new home for comparison
5. Given the square feet is 100per sq ft. Find the break down of the cost per room for the new house along with the old house
6. Include: Pictures, Data, Charts, Floor Sketch with dimensions...
7. Create an advertisement
  - a) The following piece needs to address 5 new mathematical changes in dimensions or pricing or a combination of both. It needs to be original and creative with all ideas of the project involved. (Choose one of the following to complete)
    - i) Create a jingle for selling the home/advertising the home with dimensions
    - ii) Write a commercial dialogue for selling the house with the new features/dimensions
    - iii) Video tape a commercial for the new home
    - iv) Draw an ad for the PennySaver
    - v) Act out a skit between a buyer and seller of the new home
    - vi) Other ideas must be submitted and approved by the teacher
8. Show proof of all material you used
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Math - Problem Solving : Scaled Model

Teacher Name: **Mr. Kalata**

Student Name: \_\_\_\_\_

CATEGORY	10	6 – 9	3 – 6	0 – 3
Research	All research of the new lot and modular home are provided.	Some of the projects lot and modular home data are provided.	Either the lot or the modular home data are provided.	None of the information is provided.
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# Blue Print Project - BA

Your job:

1. Find a modular home that is at least two bedrooms with two baths – print home with dimensions
2. Find a new lot for the home and scale the home larger or smaller by at least a tenth with units clearly indicated
3. Create a blueprint illustrating all the new measurements of the new home
  - a. move rooms around
  - b. change layout
  - c. Be Creative!
3. Find the average per square foot price for the same home in the area you buy the house and price your home accordingly including the land
4. Create a poster with all information including blueprint, old and new dimensions of the walls (recommend you use excel), total areas, total price.
5. Create an advertisement
  - a. The following piece needs to address 5 new mathematical changes in dimensions or pricing or a combination of both. It needs to be original and creative with all ideas of the project involved. (Choose one of the following to complete)
    - i. Create a jingle for selling the home/advertising the home with dimensions
    - ii. Write a commercial dialogue for selling the house with the new features/dimensions
    - iii. Video tape a commercial for the new home
    - iv. Draw an ad for the PennySaver
    - v. Act out a skit between a buyer and seller of the new home
    - vi. Other ideas must be submitted and approved by the teacher
6. Show proof of all material you used
7. Credit all the sources you referred to

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<http://www.ritz-craft.com/>

Property Search

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<http://www.homes.com/>

Math - Problem Solving : Blue Print Model

Teacher Name: **Mr. Kalata**

Student Name: \_\_\_\_\_

CATEGORY	10	6 – 9	3 – 6	0 – 3
Research	All research of the new lot and modular home are provided.	Some of the projects lot and modular home data are provided.	Either the lot or the modular home data are provided.	None of the information is provided.
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Total Points \_\_\_\_\_ / 50

# Brochure Project - BB

Your job:

- 1) Find a modular home that is at least two bedrooms with one bath – print home with dimensions
- 2) Find a new lot for the home and scale the home larger or smaller by at least a tenth with units clearly indicated
- 3) Create a three fold brochure for people interested in buying this type of new home
- 4) Show all dimensions of the original home with the scaled dimensions of the new home for comparison
- 5) Find the average per square foot price for the same home in the area you buy the house and price your home accordingly including the land
- 6) Include: Pictures, Data, Charts, Floor Sketch with dimensions...
- 7) Create an advertisement
  - a) The following piece needs to address 5 new mathematical changes in dimensions or pricing or a combination of both. It needs to be original and creative with all ideas of the project involved. (Choose one of the following to complete)
    - i) Create a jingle for selling the home/advertising the home with dimensions
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    - iii) Video tape a commercial for the new home
    - iv) Draw an ad for the PennySaver
    - v) Act out a skit between a buyer and seller of the new home
    - vi) Other ideas must be submitted and approved by the teacher
- 8) Show proof of all material you used
- 9) Credit all the sources you referred to

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Math - Problem Solving : Brochure Model

Teacher Name: **Mr. Kalata**

Student Name: \_\_\_\_\_

CATEGORY	10	6 – 9	3 – 6	0 – 3
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## Scaled Model - BC

Your job:

- 1) Find a modular home that is at least two bedrooms with one bath – print home with dimensions
- 2) Find a new lot for the home and scale the home larger or smaller by at least a tenth with units clearly indicated
- 3) Create a three fold brochure for people interested in buying this type of new home
- 4) Show all dimensions of the original home with the scaled dimensions of the new home for comparison
- 5) Given the square feet is 100per sq ft. Find the break down of the cost per room for the new house along with the old house
- 6) Include: Pictures, Data, Charts, Floor Sketch with dimensions...
- 7) Create an advertisement
  - a) The following piece needs to address 5 new mathematical changes in dimensions or pricing or a combination of both. It needs to be original and creative with all ideas of the project involved. (Choose one of the following to complete)
    - i) Create a jingle for selling the home/advertising the home with dimensions
    - ii) Write a commercial dialogue for selling the house with the new features/dimensions
    - iii) Video tape a commercial for the new home
    - iv) Draw an ad for the PennySaver
    - v) Act out a skit between a buyer and seller of the new home
    - vi) Other ideas must be submitted and approved by the teacher
- 8) Show proof of all material you used
- 9) Credit all the sources you referred to

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<http://www.ritz-craft.com/>

Property Search

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<http://www.homes.com/>

Math - Problem Solving : Scaled Model

Teacher Name: **Mr. Kalata**

Student Name: \_\_\_\_\_

CATEGORY	10	6 – 9	3 – 6	0 – 3
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# Blue Print Project - CA

Your job:

- 1) Find a modular home that is at least two bedrooms and two baths – print home with dimensions
- 2) Find a new lot for the home
- 3) Make the one family home a two family home; keeping the dimensions “similar”
- 4) Create a blueprint illustrating all the new measurements of the new home
- 5) move rooms around
- 6) change layout
- 7) add another floor (optional)
- 8) Find the average per square foot price for the same home in the area you buy the house and price your home accordingly including the land.
- 9) Create a poster with all information including blueprint, old and new dimensions of the walls (recommend you use excel), total areas, total price.
- 10) Create an advertisement
  - a) The following piece needs to address 5 new mathematical changes in dimensions or pricing or a combination of both. It needs to be original and creative with all ideas of the project involved. (Choose one of the following to complete)
    - i) Create a jingle for selling the home/advertising the home with dimensions
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    - v) Act out a skit between a buyer and seller of the new home
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- 12) Credit all the sources you referred to

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Math - Problem Solving : Blue Print Model

Teacher Name: **Mr. Kalata**

Student Name: \_\_\_\_\_

CATEGORY	10	6 – 9	3 – 6	0 – 3
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Total Points \_\_\_\_\_ / 50



## Brochure Project - CB

Your job:

- 1) Find a modular home that is at least two bedrooms with one bath – print home with dimensions
- 2) Find a new lot for the home and scale the home larger or smaller by at least a tenth with units clearly indicated
- 3) Make the one family home a two family home; keeping the dimensions “similar”
- 4) Create a three fold brochure for people interested in buying this type of new home
- 5) Find the average per square foot price for the same home in the area you buy the house and price your home accordingly including the land.
- 6) Break down all the dimensions of the home including area, length, width, and price per room
- 7) Include: Pictures, Data, Charts, Floor Sketch with dimensions...
- 8) Create an advertisement
  - a) The following piece needs to address 5 new mathematical changes in dimensions or pricing or a combination of both. It needs to be original and creative with all ideas of the project involved. (Choose one of the following to complete)
    - i) Create a jingle for selling the home/advertising the home with dimensions
    - ii) Write a commercial dialogue for selling the house with the new features/dimensions
    - iii) Video tape a commercial for the new home
    - iv) Draw an ad for the PennySaver
    - v) Act out a skit between a buyer and seller of the new home
    - vi) Other ideas must be submitted and approved by the teacher
- 9) Show proof of all material you used
- 10) Credit all the sources you referred to

Modular Homes

<http://www.the-homestore.com/floorplans/search/oneStories>

<http://www.modularhomeplace.com/>

<http://www.ritz-craft.com/>

Property Search

<http://www.uspropertyadvertiser.com/>

<http://www.homes.com/>

Math - Problem Solving : Brochure Model

Teacher Name: **Mr. Kalata**

Student Name: \_\_\_\_\_

CATEGORY	10	6 – 9	3 – 6	0 – 3
Research	All research of the new lot and modular home are provided.	Some of the projects lot and modular home data are provided.	Either the lot or the modular home data are provided.	None of the information is provided.
Mathematical Errors	90-100% of the steps and solutions have no mathematical errors.	Almost all (85-89%) of the steps and solutions have no mathematical errors.	Most (75-84%) of the steps and solutions have no mathematical errors.	More than 75% of the steps and solutions have mathematical errors.
Mathematical Reasoning	Uses complex and refined mathematical reasoning.	Uses effective mathematical reasoning	Some evidence of mathematical reasoning.	Little evidence of mathematical reasoning.
Mathematical Terminology and Notation	Correct terminology and notation are always used, making it easy to understand what was done.	Correct terminology and notation are usually used, making it fairly easy to understand what was done.	Correct terminology and notation are used, but it is sometimes not easy to understand what was done.	There is little use, or a lot of inappropriate use, of terminology and notation.
Creative Piece	At least 5 mathematical dimensions/pricing are mentioned. The creative piece is at least 3 minutes long.	At least 4 mathematical dimensions/pricing are mentioned. The creative piece is at least 3 minutes long.	The required number of mathematical dimensions is not met, or the creative piece is not the required length.	Less than 4 mathematical dimensions/pricing are not met and the creative piece is not the required length.

# Scaled Model - CC

Your job:

- 1) Find a modular home that is at least two bedrooms with one bath – print home with dimensions
- 2) Find a new lot for the home and scale the home larger or smaller by at least a tenth with units clearly indicated
- 3) Create a three fold brochure for people interested in buying this type of new home
- 4) Show all dimensions of the original home with the scaled dimensions of the new home for comparison
- 5) Given the square feet is 100per sq ft. Find the break down of the cost per room for the new house along with the old house
- 6) Include: Pictures, Data, Charts, Floor Sketch with dimensions...
- 7) Create an advertisement
  - a) The following piece needs to address 5 new mathematical changes in dimensions or pricing or a combination of both. It needs to be original and creative with all ideas of the project involved. (Choose one of the following to complete)
    - i) Create a jingle for selling the home/advertising the home with dimensions
    - ii) Write a commercial dialogue for selling the house with the new features/dimensions
    - iii) Video tape a commercial for the new home
    - iv) Draw an ad for the PennySaver
    - v) Act out a skit between a buyer and seller of the new home
    - vi) Other ideas must be submitted and approved by the teacher
- 8) Show proof of all material you used
- 9) Credit all the sources you referred to

Modular Homes

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<http://www.modularhomeplace.com/>

<http://www.ritz-craft.com/>

Property Search

<http://www.uspropertyadvertiser.com/>

<http://www.homes.com/>

Math - Problem Solving : Scaled Model

Teacher Name: **Mr. Kalata**

Student Name: \_\_\_\_\_

CATEGORY	10	6 – 9	3 – 6	0 – 3
Research	All research of the new lot and modular home are provided.	Some of the projects lot and modular home data are provided.	Either the lot or the modular home data are provided.	None of the information is provided.
Mathematical Errors	90-100% of the steps and solutions have no mathematical errors.	Almost all (85-89%) of the steps and solutions have no mathematical errors.	Most (75-84%) of the steps and solutions have no mathematical errors.	More than 75% of the steps and solutions have mathematical errors.
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Mathematical Terminology and Notation	Correct terminology and notation are always used, making it easy to understand what was done.	Correct terminology and notation are usually used, making it fairly easy to understand what was done.	Correct terminology and notation are used, but it is sometimes not easy to understand what was done.	There is little use, or a lot of inappropriate use, of terminology and notation.
Creative Piece	At least 5 mathematical dimensions/pricing are mentioned. The creative piece is at least 3 minutes long.	At least 4 mathematical dimensions/pricing are mentioned. The creative piece is at least 3 minutes long.	The required number of mathematical dimensions is not met, or the creative piece is not the required length.	Less than 4 mathematical dimensions/pricing are not met and the creative piece is not the required length.

## Peer Evaluation Form: Group Work

*Team Name:* \_\_\_\_\_

*Your Name:* \_\_\_\_\_

The following is a list of statements to be answered for yourself and for each of your group members. Think carefully about assigning rating values for each of the statements.

**1-Strongly Agree 2-Agree 3-Weakly Agree 4-Disagree 5-Strongly Disagree**

	<b>Self:</b>	<b>Teammate:</b>	<b>Teammate:</b>	<b>Teammate:</b>
Names:				
Was dependable in attending group meetings.				
Willingly accepted assigned tasks.				
Contributed positively to group discussions.				
Completed work on time or made alternative arrangements.				
Helped others with their work when needed.				
Did work accurately and completely.				
Contributed a fair share to weekly assignments.				
Worked well with other group members.				
Was a valuable member of the team overall.				
Brings new information to the				

group.				
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Anchor Assignment

*For the following problems, you may need to illustrate the data. Please provide work shown in the space provided. Show all work for full credit.*

1.  $\triangle ABC$  is similar to  $\triangle XYZ$ . The length AB is 10. The length of BC is 7. Find the length XY if the length YZ is 14.
  
  
  
  
  
  
  
  
  
  
2. Marty has a scale model of a car. The scale is 1 in: 32 in. If the model is 6.75 in. long, how long is the actual car?
  
  
  
  
  
  
  
  
  
  
3. A blueprint scale is 1 in. : 12 ft. The width of a building is 48 ft. What is the width of the building on the blueprint?
  
  
  
  
  
  
  
  
  
  
4. Angie is using similar triangles to find the height of a tree. A stick that is 5 ft. tall casts a shadow that is 4 ft. long. The tree casts a shadow that is 22 ft. long. How tall is the tree?
  
  
  
  
  
  
  
  
  
  
5. A map has a scale of 1 in. : 25 mi. Two cities are 175 mi. apart. How far apart are they on the map?

Websites Used:

[www.ezwebsite.org/Photos/.../Practice%20Chapter%20Four.doc](http://www.ezwebsite.org/Photos/.../Practice%20Chapter%20Four.doc)

<http://www.the-homestore.com/floorplans/search/oneStories>

<http://www.modularhomeplace.com/>

<http://www.ritz-craft.com/>

<http://www.uspropertyadvertiser.com/>

<http://www.homes.com/>

Concepts:

Understanding by backward Design - Grant Wiggins

Differentiated Instruction- C.A. Tomlinson

Rubric:

Rubistar was used to create the rubrics. <http://rubistar.4teachers.org/index.php>