Moving Straight Ahead
Investigation #3
I2T2 – 5 day Lesson Plan
Grade 8
Graphing Calculator

Johanna Hawkins
December 1, 2005
Overall Objectives for the Unit:

• Students will be able to connect solutions in graphs and tables to solutions of equations
• Students will be able to find a solution common to two linear equations by graphing
• Students will be able to understand how the y-intercept appears in the table and equations
• Students will be able to understand how the rate of change (the coefficient m) appears in equations and affects the graph of a line

New York State Content Strands:
8.A.15 Find a set of ordered pairs to satisfy a given linear numerical pattern (expressed algebraically); then plot the ordered pairs and draw the straight line
8.A.16 Define and use correct terminology when referring to function (domain and range)

New York State Process Strands:
8.PS.6 Represent problem situations numerically, algebraically, and graphically
8.R.1 Use physical objects, drawing, charts, tables, graphs, symbols, equations, and technology as representations
8.R.2 Explain, describe, and defend mathematical ideas using representations

NCTM Standards:
Algebra:
Students will
• use graphs to analyze the nature of changes in quantities in linear relationships.
• explore relationships between symbolic expressions and graphs of lines, paying particular attention to the meaning of intercept and slope
• use symbolic algebra to represent situations and to solve problems, especially those that involve linear relationships
• Recognize and generate equivalent forms for simple algebraic expressions and solve linear equations
Overview of Daily Lessons:

**Day 1:** Students will enter the room and complete the vocabulary list for the week (approx. 10 min). When complete, all students individually will read pg. 35 in their textbook. We will review the three pledge plans and their equations, which we learned in Problem 2.3. After the review students will break into assigned pairs and complete Problem 3.1 and it's Follow-up from pg. 36. Homework will be assigned from ACE questions and students will be required to finish problem and follow-up if not complete at the end of the period. (Graphing Calculators are required for today)

**Day 2:** First 5 minutes are spent answering the Essential Question. When complete as a class we will review the window settings and trace feature of the graphing calculator on page 37 of the textbook. As a class we will discuss the Think About This! on page 38 of the textbook. Students will then break into assigned groups and read over Problem 3.2. I will go over equation i to make sure all students are clear on how to use the graphing calculator to solve these problems. Homework will be assigned. (Graphing calculators are required for this problem)

**Day 3:** First 5 minutes are spent on answering the Essential Question. As a warm-up activity the class will go over the previous day’s follow-up assignment. When complete, students will break into groups of 3 to 4 and begin Problem 3.3. Students will be assigned ACE questions for homework today. (Graphing calculators are required for this Problem)

**Day 4:** First 5 minutes are spent on answering the Essential Question. As a warm-up students will be given the opportunity to ask any questions on the homework from the night before. Teacher will choose 1 question from homework assignment if no questions are asked. As a class we will go over Follow-up 3.3. Homework will be studying for the vocabulary quiz. (Graphing calculators are required for this Activity)

**Day 5:** First 15 minutes are spent on students taking the vocabulary quiz. When finished with the quiz students will be expected to read over the introduction on page 41. As a class we will go over the reading and explore point of intersection on the graphing calculator. Students will break into pairs and complete Problem 3.4 and the Follow-up. Students will be assigned ACE questions and to
finish Problem 3.4 and the Follow-up activity. (Graphing calculators are required for this Activity)

**Resources:**

  Authors: Lappan, Fey, Fitzgerald, Friel, and Phillips
- National Council Teacher of Mathematics
  [http://nctm.org/standards/](http://nctm.org/standards/)
- New York State Education Department

**Materials:**

- Graphing calculator- TI 83+
- Overhead with connections to use calculator
- Worksheets (including Vocabulary Quiz)
- Textbook: Moving Straight Ahead Teacher Edition
- Graph paper
- Daily

*Daily: Binder, pen/pencil, textbook (student edition) and calculator*
Unit: Moving Straight Ahead
Investigation #3 Exploring Lines Using a Graphing Calculator
Dates Covered: 5 days

Content Strands
Number Sense and Operations Probability and Statistics
Algebra
Geometry Measurement

Process Strands
Problems Solving Communications
Reasoning and Proof Connections Representation

Vocabulary
Positive Numbers Rational Number Point of Intersection
Negative Numbers Line Segment Slope
Similar Figures Pre Image
Radius Y-intercept

Performance Indicators and Objectives

8.A.15: Understand that numerical data can be represented in multiple ways; arithmetically, algebraically, and graphically

8.A.16: Find a set of ordered pairs to satisfy a given linear numerical pattern (expresses algebraically; then plot the ordered pairs and draw the line

Objectives:
• Students will be able to connect solutions in graphs and tables to solutions of equations
• Students will be able to find a solution common to two linear equations by graphing
• Students will be able to understand how the y-intercept appears in the table and equations
• Students will be able to understand how the rate of change (the coefficient m) appears in equations and affects the graph of a line

**Materials**

Packet/Worksheet  Daily  Scissors/Tape  
Markers/Crayons  
Movie  Ruler  Graph Paper  Construction Paper  
Provided Manipulatives  Computers  Calculator  
Other: ___

**Assessments**

Homework  Classwork  Bellwork  Discussion  
Quiz  Test  Journal Entry  Vocabulary  Project

**Essential Questions**

(red type indicates the answers to the questions)

**Day 1:** Complete Vocabulary worksheet provided

**Day 2:** What affects the steepness of the line? **Slope or # in front of letter**  
Which equation would produce a steeper line?  
Y = 3x or Y = -7x  y = 3x  
Where would y = 4x + 4 start on the first quadrant graph?  
(0 , 4)

**Day 3:** What are the y-intercepts for the following equations?  
Y = 7x  y = -3x-9  y = 6  
(0. 0)  (0,-9)  (0,6)
Day 4: How do you feel about school so far? What do you think your progress report will look like?

Student answers will vary

Day 5: Students will take the vocabulary Quiz (quiz and answers are provided)
Day 1: Getting to the Point

Main Objectives of the Lesson: Students will be able to take any point on the line and understand the meaning of it as a solution of an equation and translate it verbally in regards to the pledge plans. Students should also begin understanding how to use the graphing calculators’ functions as ways to check their on paper work.

Outline of lesson with instructions for the teacher

A. Bellwork
   1. Vocabulary—allow students to use math dictionaries in the back of the room—about 10 minutes to look up words and then go over any words they are unsure of

B. Classwork
   1. Read page 35 silently, and then discuss reading as a class
   2. Review Pledge Plans of Alana, Gilberto, and Leanne from Problem 2.3 (also reviewed in reading)
   3. Discuss what a point on the graph means in terms of the pledge plans and as a solution to the equation
   4. Read over Problem 3.1 and make sure all students understand task
   5. Break into assigned groups and begin problem (see student worksheet provided—it’s problem 3.1 typed out)
   6. Go over answers to the Problem as a class—have students share their answers and explanations
   7. If time allows, begin Follow-up 3.1 (if no time it will become homework)

C. Homework
   1. Finish any work from Problem and Follow-up 3.1 (will go over answers to the Follow-up tomorrow)
   2. ACE questions page 49 #24-26 on lined paper (Moving Straight Ahead textbook—student edition)
Answers are given in red, not full definitions, just a brief description of the words

1. positive numbers: any number to the right of 0 on the number line
2. negative numbers: any number to the left of 0 on the number line
3. similar figures: two figures that are the same shape but two different sizes
4. radius: the distance from the center of a circle to any point on the circle
5. rational number: any number that can be written as a fraction
6. line segment: a section of a line that has two endpoints
7. pre image: the first image when graph images and performing transformations
8. y intercept: the place where the graph crosses the y-axis
9. point of intersection: the point where two graphs cross each other
10. slope: the steepness of a line (rate of change and the number in front of the letter)
Problem 3.1 Student Worksheet (Created From CMP Moving Straight Ahead) 
Answers written in Red

Name: ____________________________  HR#: ________
Date: ____________________________  3.1

Getting to the Point

A. Based on the table and graph for Alana’s pledge plan:
   The point (14, 12) is on the graph of Alana’s plan. Write a question you could answer by locating this point.

   Question: Student Answers will vary in content but overall idea should be:
   • If a participant walks 12 miles how much would a sponsor owe?
   • If a participant collects $12 how many miles did he or she walk?

B. How can you use the equation for Alana’s plan to check the answer to the question you wrote in part A? 
   You can use the equation for Alana’s pledge plan to check my question in Part A by plugging in the numbers and solving.
   
   \[
   12 = 5 + .5(14) \\
   12 = 5 + 7 \\
   12 = 12
   \]

C. 1. For a sponsor to owe a student $17 under Alan’s pledge plan, how many miles would the student have to walk? 24 miles
   How did you know this? You can get the information from the graph or you can plug numbers into the equation and solve.
   
   \[
   17 = 5 + .5x \\
   -5 -5 \\
   12 = .5 x \\
   /.5 /.5 \\
   24 = x
   \]

   2. Was the graph or the equation more helpful in answering part 1? Student answers will vary.
Follow-up 3.1-Graphing Calculator needed for this activity)

1. Aretha is trying to answer a question about Alana’s pledge plan. She writes: $A = 5 + .5(28)$. What question is she trying to answer?
Aretha is trying to answer the question, What would a sponsor owe if a participant walked 28 miles?

2. a. Daniel is trying to answer a question about Alana’s pledge plan. He writes: $46 = 5 + .5d$. What question is he trying to answer? Daniel is trying to answer the question, What distance would have to be walked if $46 was collected?

   b. Daniel decides to use a calculator to help him answer the question from Part A. He enters Alana’s equation as $Y_1 = 5 + .5x$ and presses GRAPH. He uses the TRACE key to search for an answer. Try this in your own graphing calculator to see if you can get the same picture. Help Daniel interpret the information in the window below to determine the question. (To check your graph see page 36 in student edition) The $y$ value at this point is almost 46, and the $x$ value is almost 82, so this means about 82 miles would have to be walked to collect $46.

   c. Daniel could have answered the question by making a table. Use your calculator to make a table for $Y_1 = 5 + .5x$. Copy a section of the table you could use to answer Daniel’s question. (Table is provided they will have to label and fill in values) Student answers will vary!!!! One possible answer is given below

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>79</td>
<td>44.5</td>
</tr>
<tr>
<td>80</td>
<td>45</td>
</tr>
<tr>
<td>81</td>
<td>45.5</td>
</tr>
<tr>
<td>82</td>
<td>46</td>
</tr>
<tr>
<td>83</td>
<td>46.5</td>
</tr>
</tbody>
</table>
**Day 2: Graphing Lines**

**Main Objectives of the Lesson:** Students understand how to use the graphing as a way to solve and check equations and their solutions. By the end of the problem students should be able to complete a table and decide which ledge plan is reasonable. They should also be able to tell whether a graph is decreasing, staying the same, or increasing from a graph, a table, or an equation.

**Outline of lesson with instructions for the teacher**

**A. Bellwork**

1. **Essential Question**— What affects the steepness of the line? *Slope or # in front of letter*
   Which equation would produce a steeper line? $Y = 3x$ or $Y = -7x$ $y = 3x$
   Where would $y = 4x + 4$ start on the first quadrant graph? $(0, 4)$

**B. Classwork**

1. Go over follow-up from yesterday— have students share their answers. Also go over any homework questions. Collect worksheet and homework.
2. Read page 37 together, and have students complete the Think About This!
3. Discuss the results from the Think About This!
4. Read over Problem 3.2 and make sure all students understand the task they are to complete.
5. Break into assigned groups and begin problem (see student worksheet provided—it’s problem 3.2 typed out)
6. Go over answers to the problem as a class—have students share their answers and explanations
7. If time allows, begin Follow-up 3.2 (if no time it will become homework)

**C. Homework**

1. Finish any work from Problem and Follow-up 3.2 (will go over answers to the Follow-up tomorrow)
2. ACE questions page 48 #18-21, on lined paper (Moving
Name: __________________________

**Problem 3.2**

A. What does each pledge plan mean?
   
   • i. The participant earns $3 for each mile walked
   • ii. The participant earns $2 for each mile walked
   • iii. The participant earns $5 for each mile walked minus a $3 fee
   • iv. The participant gets a $6 donation and then loses $1 for each mile walked
   • v. The participant gets a $2 donation (the number of miles walked has no effect on how much is collected)

B. Answer the following questions and graph their solutions on graph paper. You can graph all of the lines on the same set of axes just use a different color for each line.

   i. $y = 3x$ reasonable

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>15</td>
</tr>
</tbody>
</table>

   ii. $y = -2x$ unreasonable-losing money

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-2</td>
</tr>
<tr>
<td>2</td>
<td>-4</td>
</tr>
<tr>
<td>3</td>
<td>-6</td>
</tr>
<tr>
<td>4</td>
<td>-8</td>
</tr>
<tr>
<td>5</td>
<td>-10</td>
</tr>
</tbody>
</table>
iii. \( y = 5x - 3 \) reasonable as long as the participant walks 1 mile

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>5</td>
<td>22</td>
</tr>
</tbody>
</table>

iv. \( y = -x + 6 \) unreasonable you lose money

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>

v. \( y = 2 \) reasonable as long as the participant wasn’t concerned about collecting more money for more miles

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

C. Graph each pledge plan with a graphing calculator. Use a window that shows the graph clearly. Tell what window you used for each graph and sketch in each space for each question. Student answers will vary possible answers in teacher edition on page 52l and m.

i. window: ii. window: iii. Window: iv. Window:

sketch: sketch: sketch: sketch:
D. For each pledge plan, tell whether the y values increase, decrease, or stay the same as the x values increase.

i) increase
ii) decrease
iii) increase
iv) decrease
v) stays the same

3.2 Follow up

1. For each of the five equations, give the coordinates of the points where the line crosses the x and y-axis.
i.) x axis: (0, 0), y axis: (0, 0)

ii.) x axis: (0, 0), y axis: (0, 0)

iii.) x axis: (0, -3), y axis: (3/5, -0)

iv.) x axis: (0, 6), y axis: (6, 0)

v.) x axis: (doesn’t), y axis: (0, 2)

2. Ali says that x=-1 makes the equation –8 = -3 + 5x true. Tamara tries this value in the equation. She says Ali is wrong because -3 + 5(-1) is -2 not -8. Why do you think these students found different answers? (Possible Answer) Tamara has added -3 and 5 to get 2 and then multiplied by -1. Ali’s answer is correct, because he multiplied -1 by 5 to get -5 and then added -3.
Day 3: Finding Solutions

Main Objectives of the Lesson: Students will be able to understand the relationship between a general equation, and the equation you get by substituting a value in for x or y.

Graphing Calculator Required!!

Outline of lesson with instructions for the teacher

A. Bellwork
   1. Essential Question- What are the y-intercepts for the following equations?
      
      \[ Y = 7x \quad y = -3x - 9 \quad y = 6 \]
      
      \[(0, 0) \quad (0, -9) \quad (0, 6)\]

B. Classwork
   1. Go over 3.2 Follow-up and any homework questions from last night. Collect homework and worksheet.

   2. Read pages 39 and 40 together and discuss, also explain the task on page 40.

   3. Students break into small groups (no more than 3 in a group and they need their graphing calculators).

   4. Students will complete Problem 3.3 worksheet in their groups. See attached student worksheet, answers are in red.

   5. Go over answers to Problem 3.3 after students have completed the task.

C. Homework

   1. Finish up any work on Problem 3.3

   2. ACE 18 – 21, 28, 29 Answers are in the teacher edition.
Problem 3.3- Finding Solutions

Consider the following equations.

i. \( y = 3x \)  
ii. \( y = -2x \)  
iii. \( y = 5x - 3 \)  
iv. \( y = -x + 6 \)  
v. \( y = 2 \)

A.  
1. Which equation has a graph you can trace to find the value of \( x \) that makes \(-8 = 5x - 3\) a true statement?  
   Equation iii. \( y = 5x - 3 \).

2. Use your graphing calculator to find the value of \( x \). \( x = -1 \)

We call this value the solution to the equation \(-8 = 5x - 3\).

B.  
1. Which equation has a table you can use to find the value of \( x \) that makes: \( 6.8 = -2x \) true.  
   Equation ii. \( y = -2x \).

2. Make a table with your graphing calculator, and find the value of \( x \). Copy the part of the table you used to find the solution.

\[ \begin{array}{|c|c|} 
\hline
X & Y_1 \\
\hline
-3.8 & 7.6 \\
-3.7 & 7.4 \\
-3.6 & 7.2 \\
-3.5 & 7 \\
-3.4 & 6.8 \\
-3.3 & 6.6 \\
\hline
\end{array} \]

C. Find solutions for the equations \(-8 = 5x - 3\) and \(6.8 = -2x\) by reasoning about what the equations mean rather than by using graphs or tables. Explain how you found your solutions. Possible answer on pg. 52n in teacher’s edition of Moving Straight Ahead, student answers could vary.

D. 1. How does finding the solution to \(-8 = 5x - 3\) help you find a coordinate pair that fits the equation?  
   Because \( x = -1 \) is a
solution to the equation 

\[-8 = 5x - 3\]

fits the equation 

\[y = 5x - 3.\]

2. Find three other coordinate pairs that fit the equation 

\[y = 5x - 3.\]

Possible answers: (0, -3), (4, 17), and (-4, -23).

How can you prove your coordinate pairs fit the equation? Possible answer: Each can be shown to fit the equation by replacing \(x\) in the equation with the first number and solving the expression. The result will be the second number.

**Day 4: Follow-up to Finding Solutions**

**Main Objectives of the Lesson:** Students will be able to understand the relationship between a general equation, and the equation you get by substituting a value in for \(x\) or \(y\). (today is a follow up assignment to yesterday’s lesson)

**Graphing Calculator Required!!**

**Outline of lesson with instructions for the teacher**

A. Bellwork

1. Essential Question- How do you feel about the school year so far? What do you think your five-week report will look like? Student answers will vary- purpose is to get students to practice writing in complete sentences and use proper grammar

B. Classwork

1. Go any homework questions and any other questions from Problem 3.3. (Teacher will go over 1 question from the assignment if students have no questions) Collect Problem 3.3.

2. Students break into pairs

3. Students will complete 3.3 Follow-up on lined paper (assignment will be collected) in their pairs. See pg 40 in student
edition for assignment and page 52n in teacher edition for answers.

C. Homework
1. Study vocabulary words for quick quiz tomorrow.

Day 5:
Main Objectives of the Lesson:
Graphing Calculator Required!!
Outline of lesson with instructions for the teacher

A. Bellwork
1. Vocabulary quiz (should only take 10-15 minutes)

B. Classwork
1. When finished with the quiz students need to read over page 41 in their textbook.
2. Go over how the calculator can analyze the two equations from lesson 2.5.
3. Talk about how the calculator can find the points of intersection.
4. Students will break into pairs and complete problem 3.4 in the textbook. If time allows students can begin the follow-up.

C. Homework
1. Finish Problem and follow-up if not finished by the end of class.
Vocabulary Quiz for students- answers are written in red!

Name: ___________________________ HR#: _____
Date: ___________________________ V. Quiz 3

1. Which of the following is not a positive number? Circle your answer.

\[0, .25, \frac{1}{9}, -3, 12,000, 5, 8\]

2. In the following equations determine the y-intercepts and write them on the lines provided.

\[Y = 3x \quad Y = -9x - 6 \quad Y = 9 \quad Y = 3x + 4\]
\[\text{(0,0)} \quad \text{(0,-6)} \quad \text{(0,9)} \quad \text{(0,4)}\]

3. What is the slope of the same equations in Question #2?

\[Y = 3x \quad Y = -9x - 6 \quad Y = 9 \quad Y = 3x + 4\]
\[3 \quad -9 \quad 0 \quad 3\]

4. Draw a picture of a line segment in the space below.

---

5. Give 2 example of a rational number.

Anything that can be written as a fraction

6. Give 5 examples of negative numbers.

...-5, -4, -3, -2, -1

7. Draw a radius in the circle below.

---
Multiple Choices. Put the correct choice on the line provided.

8. A positive number is: A
   a. A number to the right of zero on a number line
   b. A number to the left of zero on a number line
   c. A number smaller than zero
   d. A number with a little line in the front of it

9. Which of the following are not Rational Numbers: D
   a. 4
   b. –9
   c. 3.14
   d. Pi

10. A point of intersection is: C
    a. A point where to things never touch
    b. Two lines that are on top of each other
    c. The point where two things cross over each other and can sometimes continue on

11. Similar Figures are: C
    a. Two figures that are the same size and shape
    b. Two figures that are different shapes and sizes
    c. Two figures that are the same shape but different sizes

12. Pre image: C
    a. Is the 3rd image
    b. Is the 5th image
    c. Is the first image
    d. Is the last image

13. A y-intercept is the following: A
    a. In the form (0, b)
    b. The point where the graph crosses the x-axis
    c. Both a and b
    d. The point where the graph crosses –5

Bonus:
The quadrants are labeled in what kind of numbers? The quadrants are labeled in Roman Numerals
Problem 3.4 Student Worksheet—answers are in **RED**.
Name: ____________________________  HR#: ____________
Date: ____________________________  3.4

**Problem 3.4**

Suppose your class is planning a skating party to celebrate the end of the school year. Your committee is in charge of finding a place to rent in-line skates for a reasonable price. You get quotes from two companies:

**Roll-Away Skates** charges $5.00 per person

**Wheelie’s Skates and Stuff** charges $100 plus $3.00 per person

Which company should you choose if you want to keep the cost to a minimum? (Try a couple of different choices for the number of students that you are taking on the trip)

30 people:
- RAS: **150.00**
- WSS: **190.00**

50 people:
- RAS: **250.00**
- WSS: **250.00**

150:
- RAS: **750.00**
- WSS: **550.00**

Which company would you take and when? **Student Answers will vary—but conclusion should be that the more people you take you would take the Wheelies Skate and the fewer people you take you would want to use Roll Away.**
Follow-up 3.4

In these problems let $y$ be the total cost to rent the skates and $x$ is the number of people attending the party.

1. a. For each company, write an equation for the relationship between the number of people and the cost.

   RAS: $TC = 5n$
   WSS: $TC = 100 + 3n$

   b. In the same window, graph the equations for both companies.
   Graph answer on page 52o in teacher’s edition.

   c. What ranges did you use for the number of people? For the rental cost? Possible answer:
      $X = 0$ to 75 and $y = 0$ to 350

2. On which graph is the point $(8,40)$? Roll-Away Skates What does this point mean in terms of the cost to rent skates? If 8 people rent skates, this company will charge $40.

3. On which graph is the point $(8, 124)$? Wheelie’s What does this point mean in terms of the cost to rent skates? If 8 people rent skates, this company will charge $124.

4. Find the point of intersection of the two graphs. What does this point mean in terms of the cost to rent skates? (50, 250) What does this point mean in terms of the cost to rent skates? If 50 people rent skates, these companies will both charge $250.

5. If you write a linear equation in the form $y = mx + b$, the $y$ intercept is $(0,b)$. 

23
a.) find the y intercept of the equations that your wrote form question #1

RAS y intercept: \((0,0)\)

WSS y intercept: \((0,100)\)

b.) What do the y intercepts mean in terms of the cost to rent skates? Possible Answer: The cost to rent no skates

6. What are the coefficients of \(x\) in the equations that you came up with in question #1?

RAS coefficient: 5

WSS coefficient: 3

What do these coefficients mean in terms of the cost to rent skates? The coefficient affects the cost per person to rent skates.

What effects do these coefficients have on the graphs of the two lines? The coefficient affects the steepness of the line.

7. Which company would you choose if 100 students are planning to attend the party? Wheelie's

Why? RAS would charge $500 and WSS would charge $400, so WSS is the better deal.

8. If your budget for skate rental is $250, how many pairs of skates can you rent from each company?

RAS: 50

WSS: 50
**Conclusion:** I completed this unit plan with the use of my Moving Straight Ahead CMP math book in five full class periods. The curriculum is both new to me and some of the students. I felt the units were very effective in accomplishing the unit goals and my personal goals. The students really enjoyed using the Ti-83+ graphing calculator, for most of them it was the first time. I used the worksheets as a guideline for students to practice writing their answers on the answer line and in complete sentence form. All the worksheets were created from the materials in the textbook. Having students present their answers to the problems to their peers seemed to have a very positive influence on learning. This involved the students in the learning process, and explaining their answers is the best way for me to assess their understanding. Thank you for all the materials and knowledge I gained from I2T2 this summer.