Observation Log

Hours Spent at Hillsborough-Deering Middle School
and Hillsborough-Deering High School

Ryan Farnsworth
Secondary Mathematics Methods
Methods Professor: R. Duncan
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Ryan,
you just got better
& better.
Nice work.
Nice portfolio
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Observation Log Preface

In my methods class, part of the course requirement was that we, the students, would go out to schools in the area and complete 30 hours of observation. My 30 hours of observation were done with a number of cooperating teachers at two schools. The first school that I was able to observe at was Hillsborough-Deering Middle School. The second school that I was able to observe at was Hillsborough-Deering High School. Both experiences were eye-opening, and from them I was able to learn a lot. Some things that I was able to take from observing other teachers were things that I would, and wouldn't do, as well as things that made me question my own personal thoughts and beliefs. My observational experiences in various classrooms were very beneficial experiences that have helped me grow as an individual aspiring to be a mathematics teacher.

The environment in which I was able to observe consisted of the Hillsborough-Deering Middle and High Schools. The schools were not the type of schools which I was accustomed to seeing. The classes which I was able to observe in were mathematics courses. It is difficult to put a course title to some of the classes I observed in the middle school. The reason for this is because the mathematics curriculum there is not what one would think of as a traditional mathematics system. The middle school's reasoning to not having a traditional system is beneficial to the students however. The reason is that a lot of the students have not yet mastered the necessary arithmetic skills to move into various mathematics topics. For example, some of the students are still working on knowing their multiplication tables, understanding fractions, and basic arithmetic rules. This middle school system allows the students who still need basic mathematical tools learn them and the students who do not need those skills move on to various topics which include pre-algebra, algebra, and geometry. The high school was a much different environment.

For an observer of classes at Hillsborough-Deering High School, one can very clearly see a traditional mathematics program. By this I mean that the topics are taught by semester long courses such as pre-algebra, algebra I, geometry, probability and statistics, and various honors courses. Even though the two environments I observed in were in the same district, the differences of how the programs were constructed are very different. This gave me two different observational experiences that I feel benefit me in the long run.

While it is hard to describe a typical day of observing, the things that I did do are very similar no matter where I was observing. While at the middle school, the tasks which I was able to accomplish consisted of:

- Regular observation of classes.
- Conducted guided practice one on one with students.
- Conducted guided practice to the entire class.
- Served as an aide in answering students' questions on a particular problem.
- Give class notes to the class.
- Co-taught an entire class.
- Taught and entire class.

While at the high school my experience consisted of the following:

- Regular observation of classes.
- Served as an aide in answering students' questions on a particular problem.

While the two experiences were different in what I was doing, and the level at which I was doing them, I found that being able to observe at both locations to be very valuable for me.

From my experiences observing my 30 hours for Methods Class, I was able to learn many things about teaching and about myself which I feel are going to be a benefit for me. The first thing that I took away from my observing experience was that the students that I will be teaching will most likely not be at the level I hope they are to be at. Some students may be below my expectations and some may be above. The next thing that I learned by observing is that I would prefer to teach at a high school level and at a school district that has a more traditional mathematics program. It is not that I would not like to teach somewhere else, it is that by completing my observations, I would feel more comfortable and I feel I would fit in better in a more traditional environment. Overall, from the observation experiences I have had, I feel that it is a very important part of education for teachers to be able to go out into the field and observe other teachers. Through my own experiences I feel as if it has enabled me to grow as a future teacher.

Cooperating Teacher: Mrs. McNalley

Date: September 30, 2008

Class Title: Algebra

Class Time: 8:00 – 9:00 am

Topic of the Lesson: Fractions and Percents

A summary of Teaching Techniques Used:

The teaching techniques used by Mrs. McNalley during this class period were similar to ones that I have seen before by other teachers. She started off the class with a "class starter". What this was were two problems that dealt with fractions and percents. These problems were put up on the white board, and the students were expected to come into class, take out their notebooks, and start the problems.

After the students finished their problems, Mrs. McNalley went over the problems as an entire class. The students were able to deal with their individual problems by asking questions during this time. After the review of the class starter was done, the students took out their homework from the night before to go over as a class. Mrs. McNalley answered everyone's questions and corrected the homework as a group.

When homework review time was done, the remainder of the class was spent on a quiz on Functions and Linear Graphing (see attached). For this quiz, students were allowed to use their notebooks.

A Summary of Classroom Management Strategies Used:

Mrs. McNalley tends to be the students' friend. However, when dealing with basic policies of the classroom and the school, if the students cross the line she is sure to be stern with them. One technique observed in this class was to wait for the students to stop talking until she began to give instructions.

A Summary of Other "Interesting" Observations:

After sitting in on Mrs. McNalley's class, I found it interesting that the majority of class time was spent on one topic, fractions and percents. Then the homework they had from the night before was on graphing a linear equation. Then the quiz was on graphing a linear equation. I do not see the relationship between the two topics. I view this to be distracting; however, the change in topics might also benefit some students.

Cooperating Teacher: Mrs. Sycter

Date: September 30, 2008

Class Title: Algebra

Class Time: 9:00-10:00 am

Topic of the Lesson: Fractions and Percents and Linear Functions

A summary of Teaching Techniques Used:

The teaching techniques used by Mrs. Sycter during this class period were similar to ones that I have seen before by other teachers. She started off the class with a "class starter". However she called this a quiz and there were three problems that dealt with fractions and percents. These problems were put up on the white board, and the students were expected to come into class, take out a piece of scrap paper, and start the problems.

After the students finished their problems, Mrs. Sycter went over the problems quickly and then moved into graphing linear equations. The rest of class dealt with a review and examples on the board of linear equations and graphing. Then Mrs. Sycter gave the students the rest of class time to work on their homework.

A Summary of Classroom Management Strategies Used:

Mrs. Sycter ran a tight classroom. To begin with the seating situation for the students were in rows. This lessened student conversations. However, when dealing with students talking, she would address it by saying, "Can we please stop talking?" After doing this, the class would quiet down and class would continue as usual.

A Summary of Other "Interesting" Observations:

After seeing Mrs. Sycter's class, I was able to compare two teachers, Mrs. McNalley and Mrs. Sycter. Mrs. Sycter runs a "tighter class". By this I mean that she is stricter with her classroom management. Mrs. McNalley tends to be a little bit softer then Mrs. Sycter, however, the students still respond to Mrs. McNalley.

Cooperating Teacher: Mrs. McNalley

Date: September 30, 2008

Class Title: Algebra

Class Time: 10:00 – 11:00 am

Topic of the Lesson: Fractions and Percents

A summary of Teaching Techniques Used:

This class was run the same way that Mrs. McNalley's first algebra class was taught earlier that day. The students started with a class starter and then moved into reviewing their homework from the night before. All of the students' questions were answered. This class differed from her first algebra class. Instead of doing the quiz as a quiz, she used it as the students' homework.

A Summary of Classroom Management Strategies Used:

During this class the same classroom management techniques were used. When dealing with basic policies of the classroom and the school, if the students cross the line she is sure to be stern with them. One technique observed in this class was to wait for the students to stop talking until she began to give instructions. Additionally, it was not until this class period that I picked up on her seating structure. The students sat at tables arranged in a "U" with Mrs. McNalley's desk in the middle of the "U" at the front of the class.

A Summary of Other "Interesting" Observations:

The only interesting thing about this class that I observed was that because the students in this class seemed to be struggling with the material, Mrs. McNalley changed her plans on giving a quiz. Instead of a quiz, she made it more practice for the students.

Personal Reflection
September 30, 2008

After this first day of observing, there are many things that I saw that like, that I did not like, and some things that I would have done differently. The first thing that I saw that I liked was the idea of a class starter. This was something that I have not been previously been introduced to. However, I feel that this is a great way to have the class come in and get settled and get started.

There was one thing that I did not like; in particular it was Ms. McNalley's class. She started off with one topic, fractions. After that, she reviewed the homework from the night before. Then, she presented a quiz on a different topic. This type of changing of topics in a short class is something which I would not do.

Overall this was a great day where I was able to have conversations with all the teachers I had observed briefly. I was glad to be able to get into a middle school to do some observations. I was able to see things that I liked and did not like, things I would and would not do, and I feel that is beneficial to me.

Name_____ Algebra A Quiz Functions and Linear Graphing

Find the slope of the line that passes through each pair of points.

(0, 1) (3, 4) _____ (4, -4) (2, 2)_____ (1, 2) (3, 2)_____ (2,- 2 (2, -3)_____

(3, 1) (6, 3) _____ (4, 3) (2, 4)_____ (-4, 4) (5, 4)____ (3, -5)(1, 1) _____

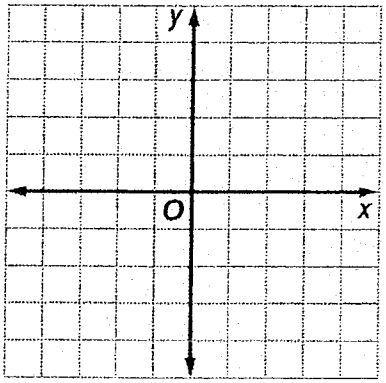
Write a rule for the function represented by the table_____

INPUT, X	-1	3	4	6
OUTPUT, Y	-5	15	20	30

Complete the function table, then graph the line.

$y = 2x - 1$

x	$2x - 1$	y	(x, y)
-1			
0			
1			
2			



For the function table above (y=2x-1) , identify the domain_____

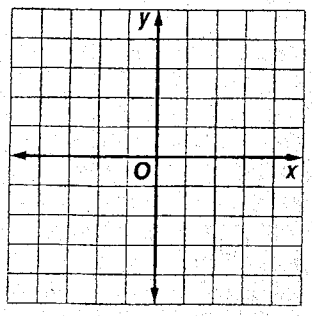
For the function table above (y=2x-1), identify the range _____

If you know the y-intercept of a line is 4 and that the slope is $-\frac{3}{2}$, how do you graph the line?

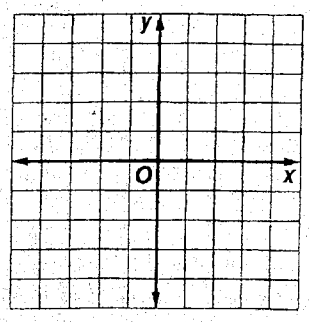
How can you find the slope and y-intercept of the graph x + y =8? (Explain in words).

Graph each equation using the slope and *y*-intercept.

4. $y = 2x + 2$

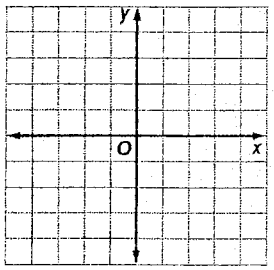


5. $y = x - 1$

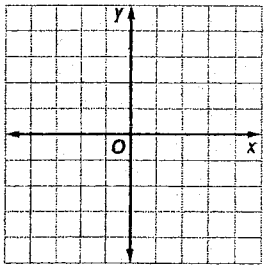


Explain and show why $\frac{-3}{-2}$ and $\frac{3}{2}$ represent the same slope.

Draw a line that has a negative slope.

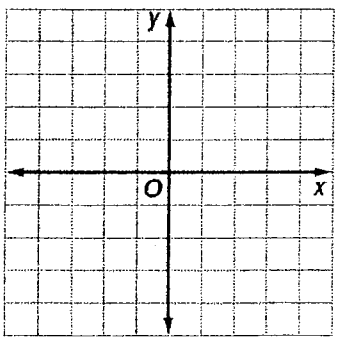


Draw a line that has a positive slope.

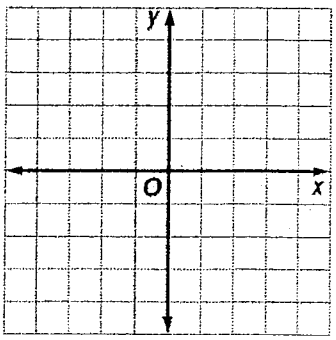


Use the "cover up" method to identify the x- intercept and the y-intercept and then graph the line.

x + 3y =6



3x -4y = 12



Cooperating Teacher: Ms. McNalley

Date: October 2, 2008

Class Title: Algebra

Class Time: 8:00 – 9:00 am

Topic of the Lesson: Polynomials

A summary of Teaching Techniques Used:

Ms. McNalley ran this class very similarly to how I have observed in the past. She started off the class with a class starter. After this she went over only one homework question. This is the question which the class agreed upon that was the most difficult problem. From here, the class went over a guided practice worksheet in pairs (see the attached worksheet). After this, the students were to work on their homework for the remainder of the class (see the attached worksheet).

A Summary of Classroom Management Strategies Used:

With this class, Ms. McNalley was not accepting students talking about things off topic. She was quick to remind students to stay on task. For the most part, Mrs. McNalley did not have to do much of this.

A Summary of Other "Interesting" Observations:

I really liked the technique Ms. McNalley used of having the students work in pairs. This enabled students to work out their own problems instead of continually asking the teacher for help. The students could ask their partner for help.

Cooperating Teacher: Mr. Duncan

Date: October 2, 2008

Class Title: Testing Strategies Presentation

Class Time: 9:00 – 10:00 am

Topic of the Lesson: Testing Strategies Presentation

A summary of Teaching Techniques Used:

The technique that Mr. Duncan used for this presentation was to have a Power Point presentation which enabled him to stay on topic and stay very organized with what he wanted to convey to the students. Mr. Duncan also used many presentation strategies to keep the attention of the audience (students), which included; moving around, being energetic, relating to the audience, and humor.

A Summary of Classroom Management Strategies Used:

The management techniques Mr. Duncan used during this presentation were to wait until the whole gymnasium went quiet. Because he just waited, students who were paying attention told the students who were talking to be quiet. This was very effective. Additionally, when he was having a problem with one of the students he asked the student to move seats while not to single out the student in front of the crowd.

A Summary of Other "Interesting" Observations:

A couple of things that could have made the presentation run smoother would be:

- Have handouts for students who would have a tough time seeing
- Have a little bit better wait time on his questions

However some things that were good about his presentation were:

- Counting up quietly to get the students attention
- Using humor
- Using a microphone so everyone could hear
- Having a dynamic presentation (audience listened and then participated with questions)

Cooperating Teacher: Mrs. Roberts

Date: October 2, 2008

Class Title: Algebra I

Class Time: 10:00 – 11:00

Topic of the Lesson: Functions and Domain and Range

A summary of Teaching Techniques Used:

Mrs. Roberts' class ran like a "well oiled machine". She is a very traditional teacher. She started off the class with reviewing the homework. She did this by having students write out the steps to the problems and having a partner to make sure the answer was correct before she went through the problems. After going through the homework, she dove into putting notes up on the board which the students copied into their notebooks. This took them until the end of class. Then the homework was to make a function table for three different functions.

A Summary of Classroom Management Strategies Used:

Mrs. Roberts dealt with classroom management in a very strict way. She was very stern with students talking and misbehaving during class. I feel as if the students knew she was very strict and because of this they were well behaved.

A Summary of Other "Interesting" Observations:

Mrs. Roberts used many terms which I was impressed that the students knew and were expected to understand. For example, the students understood the term of A intersect B and understood what it meant by making a Venn diagram. Mrs. Roberts' classroom, lesson, and classroom management was clean, orderly, and structured.

Personal Reflection
October 2, 2008

After being at the school for one day prior to this, I felt much more comfortable going into the school again. After observing today, I really liked the technique Ms. McNalley used of having the students work in pairs. This enabled students to work out their own problems instead of continually asking the teacher for help. The students could ask their partner for help. Then after this first class I went to see Mr. Duncan's presentation on testing.

I thought that Mr. Duncan gave a good presentation for students preparing to take standardized tests. A couple of things that could have made the presentation run smoother would be:

- Have handouts for students who would have a tough time seeing
- Have a little bit better wait time on his questions

However some things that were good about his presentation were:

- Counting up quietly to get the students attention
- Using humor
- Using a microphone so everyone could hear
- Having a dynamic presentation (audience listened and then participated with questions)

Overall, I thought that today was a great day at the school. I was able to see a teaching technique that I would use in my classroom, and that was having students work in pairs or groups. I feel that this is a great way for students to learn, from their other peers.

Simplify each expression.

25. $3t + 6t$

26. $4r + r$

27. $7f - 2f$

28. $9a - 8a$

29. $5c + 8c$

30. $2g - 5g$

31. $8k + 3 + 4k$

32. $7m - 5m - 6$

33. $9 - 6x + 5$

34. $7p - 1 - 9p + 5$

35. $-b - 3b + 8b + 4$

36. $5h - 6 - 8 + 7h$

37. $8b + 6 - 8b + 1$

38. $t - 5 - 2t + 5$

39. $4w - 5w + w$

40. $6m - 7 + 2m + 7$

41. $5f - 7f + f$

42. $12y - 8 + 4y + y$

43. $9a + 5 - 7a - 2a$

44. $6g - 7g + 13$

45. $7x + 6 - 9x - 3$

10/1 More Distributive Property and Simplifying Expressions

1. $3(x+8)$
2. $7(m+6)$
3. $-8(b+5)$
4. $-7(n+2)$
5. $-4(k+8)$
6. $(c-8)(-8)$
7. $-5(a-9)$
8. $(x-6)(-4)$
9. $2(a+b)$

Example 2

Simplify $2y - 2(4x + y - 3)$.

$2y - 2(4x + y - 3)$
$2y - 8x - 2y + 6$ — *Step 1: Distribute the –2.*
$-8x + 6$ — *Step 2: Collect y terms:* $2y - 2y = 0y = 0$.

Example 3

Simplify $2x - (x + 3)$.

$2x - (x + 3)$
$2x - 1(x + 3)$ — *Invisible one.*
$2x - x - 3$ — *Step 1: Distribute the –1.*
$1x - 3$ — *Step 2: Collect like terms.*
$x - 3$

Example 4

Simplify $5y - (2x + 3y - 8x) + x$.

$5y - (2x + 3y - 8x) + x$
$5y - 2x - 3y + 8x + x$ — *All terms in parentheses change signs.*
$2y + 7x$ — *Collect like terms:* $5 + (-3) = 2$, *and* $-2 + 8 + 1 = 7$.

EXERCISE 2.8

Simplify.

1. $2(x + 1)$

2. $-3(y + 4)$

3. $5x + 2(x + 1)$

4. $-2(x + 4) + 2x$

5. $5(2y - 3) + 15$

6. $-3 + 5(p + 2)$

7. $-4(x + 2y) + y$

8. $-(x + 2) + 4x$

9. $x - (x + 2)$

10. $5 - (2y + 3)$

11. $6x - 2(3y + 3x)$ Distribute –2 first.

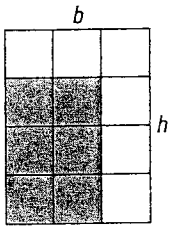
12. $2z - 3(z + 1)$ Distribute –3 first.

13. $10 + \frac{1}{2}(x + 6)$ Hint: $\frac{1}{2} \cdot \frac{6}{1} = 3$.

14. $\frac{1}{3}(6x + 1) + 3x$

15. $4x - \frac{1}{2}(8x + 1) + x$

16. $5(a + 1) + 2(a + 3 + b)$



3. The rectangle at the left has base b and height h.
   a. If all the small rectangles have the same dimensions, what is the area of the shaded region?
   b. What product of algebraic fractions is represented by the shaded area?

In 4 and 5, multiply the fractions.

4. $\frac{a}{7} \cdot \frac{b}{2}$

5. $\frac{x}{3} \cdot \frac{y}{z}$

6. *True or false.* $\frac{1}{5}n = \frac{n}{5}$.

7. Show that $\frac{4}{9}x$ is equal to $\frac{4x}{9}$.

8. *Multiple choice.* Which does not equal the others?
(a) $\frac{7t}{12}$ (b) $\frac{7}{12}t$ (c) $7t \cdot \frac{1}{12}$ (d) $\frac{7}{t} \cdot 12$

In 9–12, use the Equal Fractions Property to simplify each fraction.

9. $\frac{800}{1900}$

10. $\frac{20y}{5y}$

11. $\frac{3mn}{9mt}$

12. $\frac{24gr}{18gr^2}$

"Community gardening" has become popular in big cities where backyards are not available for planting. Several families may share the work and the harvest of a city-owned plot.

In 13–16, multiply and simplify the result.

13. $\frac{3m}{n} \cdot \frac{7m}{9}$

14. $\frac{6a}{b} \cdot \frac{b}{6a}$

15. $\frac{24c}{5d} \cdot \frac{20d}{21}$

16. $\frac{50}{9x} \cdot \frac{18x^2}{25y}$

Applying the Mathematics

17. **a.** One rectangle is half as wide and one-fourth as long as another rectangle. How do the areas of the two rectangles compare?
   b. Draw a figure to illustrate your answer.

18. The Marshall and Chen families have rectangular vegetable gardens. The length of the Marshalls' garden is $\frac{2}{3}$ the length and $\frac{1}{4}$ the width of the Chens' garden.
   a. How do the areas of the gardens compare?
   b. Check your answer by using a specific length and width for the Chens' garden.

19. *Skill sequence.* Compute in your head.
a. $\frac{5}{3} \cdot 3$ **b.** $\frac{9}{x} \cdot x$ **c.** $\frac{a}{b} \cdot b$ **d.** $n^2 \cdot \frac{a}{n^2}$

In 20 and 21, *multiple choice.* Find the fraction that is *not* equal to the other three.

20. (a) $\frac{9a}{11a}$ (b) $\frac{99}{121}$ (c) $\frac{90}{100}$ (d) $\frac{450}{550}$

21. (a) $\frac{100}{260}$ (b) $\frac{35t}{91t}$ (c) $\frac{38}{100}$ (d) $\frac{500x^2}{1300x^2}$

Functions and Relations

A pair of numbers such as (x, y) is called an **ordered pair.** In an ordered pair, the x-value is always given first. A **relation** is a set of ordered pairs. The x-values in a relation make up the **domain,** and the y-values make up the **range.** A **function** is a relation in which each x-value has only one y-value.

EXAMPLE 1

Identify the domain and range of the relation {(3, 4), (⁻1, 2), (⁻2, 4)}.

The domain is {⁻1, ⁻2, 3}.

The range is {2, 4}.

EXAMPLE 2

Is this relation a function?
{(7, 8), (⁻1, 5), (2, 6), (⁻1, 3)}

No, because the x-value ⁻1 has more than one y-value.

PRACTICE

Identify the domain and range for each relation.

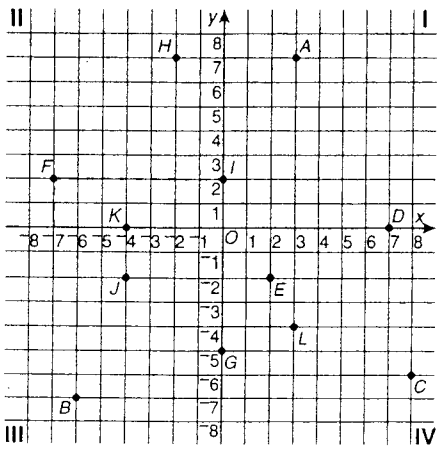
	a	b
1.	{(0, ⁻3), (2, 5), (⁻4, 2)}	{(⁻9, 1), (3, 1), (0, 3)}
	Domain: {0, 2, ⁻4}	Domain: _____
	Range: {⁻3, 5, 2}	Range: _____
2.	{(9, ⁻5), (⁻1, ⁻2), (⁻3, ⁻5), (1, ⁻2)}	{(4, ⁻1), (⁻8, ⁻1), (⁻4, ⁻1), (8, ⁻1)}
	Domain: _____	Domain: _____
	Range: _____	Range: _____
3.	{(6, 2), (0, ⁻4), (1, ⁻3), (4, 0)}	{(1, 3), (⁻1, 1), (⁻4, ⁻2), (3, 5)}
	Domain: _____	Domain: _____
	Range: _____	Range: _____

Determine whether each of the following relations is a function.

	a	b
4.	{(0, ⁻3), (2, 5), (⁻4, 2)} yes	{(0, ⁻8), (0, ⁻2), (⁻5, 1)} _____
5.	{(1, ⁻6), (3, 4), (⁻1, ⁻6), (6, 7)} _____	{(4, ⁻1), (5, ⁻1), (4, 6), (7, 8)} _____

Graphing Ordered Pairs

Ordered pairs can be graphed on a **coordinate plane.** In the coordinate plane at the right, the line labeled x is the **horizontal axis,** or ***x*-axis.** The line labeled y is the **vertical axis,** or ***y*-axis.** The point where the axes cross, or intersect, is the **origin.** The two axes divide the coordinate plane into four **quadrants.** The quadrants are numbered counterclockwise 1–4, starting with the top right quadrant. The position of a point on the graph is determined by its ordered pair, or **coordinates.** The x-coordinate tells the distance right or left of the origin. The y-coordinate tells the distance up or down.



EXAMPLE 1

What are the coordinates of Point F?

To get from the origin to Point F, count 7 units left and 2 units up.

Point F has coordinates $(^{-}7, 2)$.

EXAMPLE 2

What are the coordinates of Point L?

To get from the origin to Point L, count 3 units right and 4 units down.

Point L has coordinates $(3, ^{-}4)$.

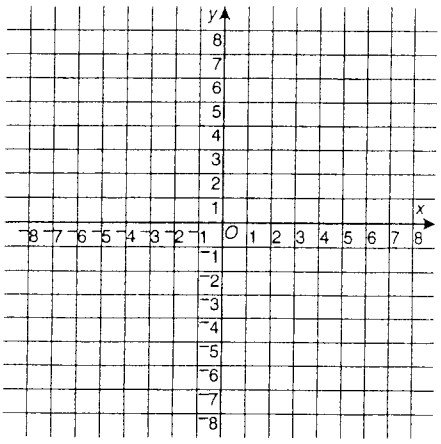
PRACTICE

Give the coordinates of each point. Refer to the graph above.

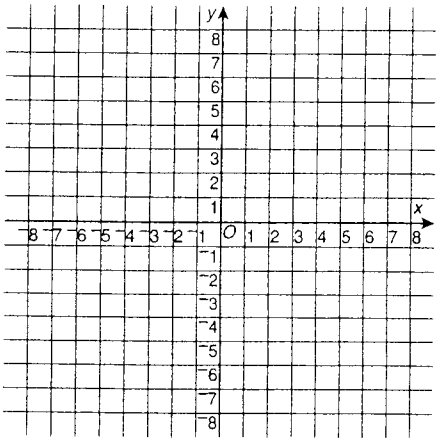
	a	*b*	*c*	*d*	*e*
1.	E (___, ___)	B (___, ___)	H (___, ___)	K (___, ___)	C (___, ___)
2.	D (___, ___)	G (___, ___)	J (___, ___)	A (___, ___)	I (___, ___)

Plot each point on the graph provided.

3. A (2, 6)
   B (3, $^{-}5$)
   C ($^{-}5$, 3)
   D ($^{-}4$, $^{-}6$)
   E (0, 1)

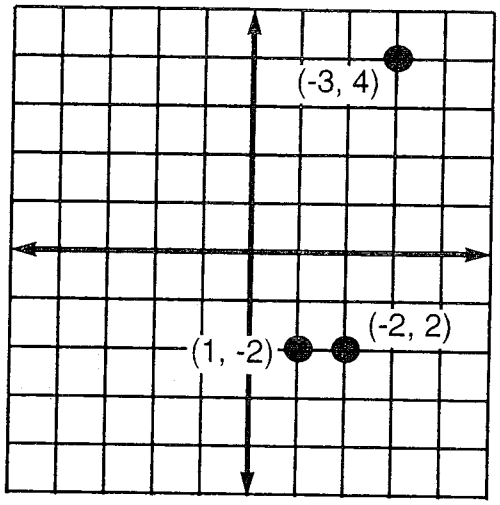


4. F ($^{-}5$, $^{-}8$)
   G (0, 8)
   H ($^{-}8$, 0)
   I (0, $^{-}7$)
   J (0, 0)



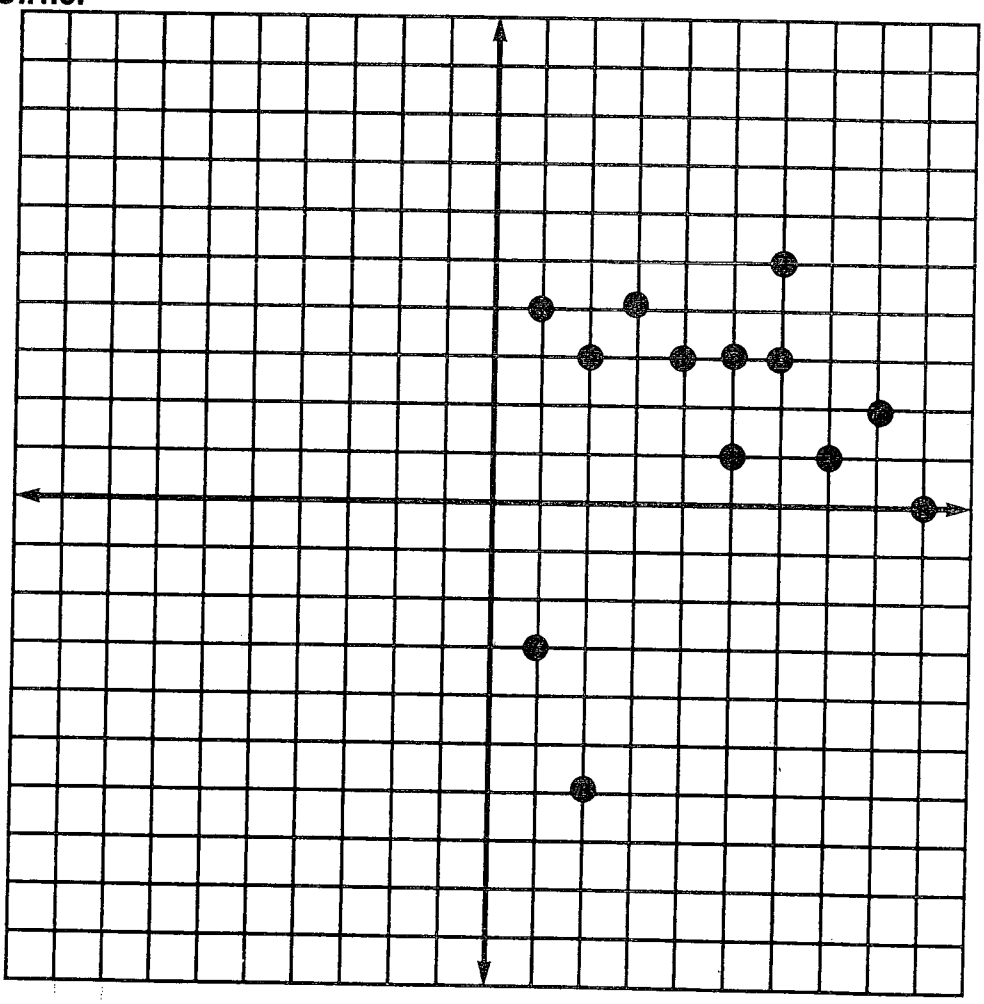
Graphing Ordered Pairs

(x,y) = (1, -2) Over 1 and down 2
(x,y) = (-3, 4) Over 3 and up 4
(x,y) = (2, -2) Over 2 and down 2



Label the following points.

A (2, -6)
B (1, -3)
C (5, 1)
D (9, 0)
E (5, 3)
F (8, 2)
G (6, 5)
H (7, 1)
I (4, 3)
J (2, 3)
K (6, 3)
L (3, 4)
M (1, 4)



Cooperating Teacher: Ms. McNalley

Date: October 9, 2008

Class Title: Algebra

Class Time: 8:00 – 9:00 am

Topic of the Lesson: Equations

A summary of Teaching Techniques Used:

Ms. McNalley used the same structure which I have always seen her use. She started off with having a class starter. This was a word problem that dealt with fractions and percents (something students should know). After working through the problem as a class, she continued on to a quiz on equations. When the students were done with this, they did more guided practice with equations (see the attached worksheets). After this the homework was to finish the worksheets.

A Summary of Classroom Management Strategies Used:

There were no new classroom management strategies seen today which have not already been discussed in other observations previous to this one.

A Summary of Other "Interesting" Observations:

I found it interesting that Ms. McNalley has a classroom schedule to her classes and no matter what she sticks with it:

- Class Starter
- Homework Review
- Guided Practice / Quiz
- Time to Start on Homework.

Cooperating Teacher: Mrs. Guerriero

Date: October 9, 2008

Class Title: Geometry

Class Time: 9:00 – 10:00

Topic of the Lesson: Various Topics

A summary of Teaching Techniques Used:

This is one of the most unique teaching strategies I have seen used. The basic concept of this type of classroom environment was to allow students to go over various topics at their own speed by going through a packet which contained one concept in geometry. Inside the packet were notes, guided practice, and an activity to further the student's knowledge. When the student completed what was in the packet, the student would take a test and then move on to the next packet. Mrs. Guerriero was more of a tutor than teacher.

A Summary of Classroom Management Strategies Used:

This class had little to no classroom management. I was able to observe students accomplish practically nothing in this class period. It was almost shocking how much Mrs. Guerriero let the students get away with. Although it was nothing big, the students would be talking and chatting and not getting any work done. There was the rare occasion that Mrs. Guerriero would raise her voice and the students would stop, but that was not many times.

A Summary of Other "Interesting" Observations:

The most interesting thing that I took away from this class is that students would sit together and they would be working on entirely different packets; that is if the students chose to do work. I feel that this type of classroom would work if students who were working on the same material sat together. Additionally, I feel that if this type of environment were to work, the teacher would need to have better control over the students.

Cooperating Teacher: Ms. McNalley

Date: October 9, 2008

Class Title: Algebra

Class Time: 10:00 – 11:00 am

Topic of the Lesson: Combining Like Terms

A summary of Teaching Techniques Used:

This was the first time that I saw Ms. McNalley deviate from here typical routine. Although she did start with a class starter as usual, what she did after that was totally different. What she did was she had a box of Munchkins divided into like piles according to type. Next the class then worked on writing an equation for the Munchkins. This took them through all the steps of problem solving:

- Understand the problem
- Label the variables
- Set up an equation
- Combined like terms
- Come up with a solution.

A Summary of Classroom Management Strategies Used:

There were no new classroom management strategies seen today which have not already been discussed in other observations previous to this one.

A Summary of Other "Interesting" Observations:

The one interesting thing that I observed in this class was that after presenting a great lesson for the students, they were allowed to eat the Munchkins. However, Ms. McNalley also had fresh fruit for students who could not have the Munchkins. This showed me that Ms. McNalley not only gave a treat for her students, but she also knew her students well enough so as to provide for the students who had food allergies or special diets.

Personal Reflection
October 9, 2008

Unfortunately, today, I saw many things in which I would not use and which I did not do. This in itself is a good thing for me to be able to know what I would and would not use in the classroom. To begin with I did no like that Ms. McNalley has the same routine every day. I feel that a sense of routine is good for students. However, constantly having the same schedule is something I did not like.

The next class I observed was geometry. After being forced to sit through this class I saw a good concept of teaching, but very poor execution. Every student was at a different point on a different packet. The students who were working on the same packets were not even sitting together. I feel that if the students who were working on the same material were to sit together, the students would get more learning accomplished. The next thing that I did not like was that the students were getting away with not doing any work for the entire period. This was unacceptable to me.

Overall, I feel that this was a trying day for me to observe. However, looking back on it, I am able to realize that I have a good idea of how I would like to teach my class.

Equations

Here is an equation in x: $10 + x = 3$

We can **solve** this equation by substituting different numbers for x. If we find a number that works, then we have found a **solution** to the equation. The only number that will work in this equation is $^-7$. We can show the solution by writing

$$x = ^-7$$

Solve each equation by substituting different numbers until you find a solution.

$5 + y = 9$ $y = 4$	$z + 1 = 10$	$3 + w = 4$	$a + 15 = 20$
$10 + x = 17$	$4 + t = 4$	$^-6 + r = ^-16$	$8 + x = 6$
$c + 6 = 5$	$^-5 + y = ^-1$	$c + ^-8 = ^-8$	$17 + a = 23$
$^-4 + a = ^-9$	$^-3 + m = ^-13$	$x + ^-2 = 5$	$4 + e = ^-4$

Joe picked a number and added 7 to it. The answer was 11. What was the number?

Equation: $x + 7 = 11$

Solution: $x = 4$

Jo picked a number and added 3 to it. The answer was 12. What was the number?

Equation:

Solution:

Chip thought of a number. He added 9 to it. The answer came out to be 14. What was Chip's number?

Equation:

Solution:

Solve each equation.

$6x = 18$ $x = 3$	$4s = 24$	$5x = 30$	$9b = 72$
$4y = 8$	$5x = 25$	$3x = -12$	$5s = 0$
$6t = 6$	$-4n = -20$	$8c = -8$	$-10e = -30$
$-7x = -21$	$-2x = 10$	$20x = 80$	$-7m = 7$

Robin multiplied 8 times a number. The answer was 48. What was Robin's number?

Equation:

Solution:

Jerry thought of a number. Then he multiplied it by 5. The answer came out to be 45. What was Jerry's number?

Equation:

Solution:

Jennifer started out with 8 dollars. Then she got some more money for her birthday. She ended up with 15 dollars. How much did she get for her birthday?

Equation:

Solution:

---

7 times some number is 28. What is the number?

Equation:

Solution:

Equivalent Equations

Look at this equation:

$$2x + 3x + 5x = 20$$

We already know that $2x + 3x + 5x$ can be simplified to $10x$. So the equation above can be rewritten as

$$10x = 20$$

Now it is easy to see that the solution to each of these equations is 2.

$10x = 20$	
$10(2)$	20
20	

✓

$2x + 3x + 5x = 20$	
$2(2) + 3(2) + 5(2)$	20
$4 + 6 + 10$	
20	

✓

Whenever two equations have the same solution, we say that they are **equivalent equations**. Since $2x + 3x + 5x = 20$ and $10x = 20$ both have the solution 2, they are equivalent equations.

When we are solving an equation, we do it in **steps**. Each step is an equivalent equation that is easier to solve. In our last step, the equation is so simple that it tells us the solution. Here are some examples:

$2x + 3x + 5x = 20$	$5x - 3x = 4 + 10$	$12 - 36 = 13y - 7y$
$10x = 20$	$2x = 14$	$-24 = 6y$
$x = 2$	$x = 7$	$y = -4$

Here are some equations for you to solve. Each problem takes two steps. First simplify the equation by combining like terms. Then find the solution.

$5x + 2x = -21$ $7x = -21$ $x = -3$	$2x + 3x = 30$	$3x + 3x = -24$	$5x + 5x = -70$
$4x + 5x = 18$	$7x - 3x = -12$	$8x - 14x = 60$	$3x + x = 36$
$5x = 13 + 7$ $5x = 20$ $x = 4$	$3x = 10 + 2$	$-4x = 19 + 9$	$7x = 30 + 40$
$6x = 5 - 17$	$8x = 30 - 6$	$2x = 23 - 23$	$3x = 11 + 22$
$56 = 2x - 9x$ $56 = -7x$ $x = -8$	$77 = 6t + 5t$	$49 - 9 = 5a$ $40 = 5a$ $a = 8$	$17 + 3 = 4x$
$18 = 7s + 2s$	$15 = 3m - 8m$	$20 - 44 = 8x$	$37 - 30 = 7x$
$20 = 7y - 12y$	$18 = 9t - 3t$	$5 + 13 = -9w$	$48 + 16 = 32y$

Name _____ Date _____ Class _____

LESSON 2-1

Practice B

Solving Equations by Adding or Subtracting

Solve each equation. Check your answers.

1. $g - 7 = 15$

2. $t + 4 = 6$

3. $13 = m - 7$

4. $x + 3.4 = 9.1$

5. $n - \frac{3}{8} = \frac{1}{8}$

6. $p - \frac{1}{3} = \frac{2}{3}$

7. $-6 + k = 32$

8. $7 = w + 9.3$

9. $8 = r + 12$

10. $y - 57 = -40$

11. $-5.1 + b = -7.1$

12. $a + 15 = 15$

13. Marietta was given a raise of \$0.75 an hour, which brought her hourly wage to \$12.25. Write and solve an equation to determine Marietta's hourly wage before her raise. Show that your answer is reasonable.

14. Brad grew $4\frac{1}{4}$ inches this year and is now $56\frac{7}{8}$ inches tall. Write and solve an equation to find Brad's height at the start of the year. Show that your answer is reasonable.

15. Heather finished a race in 58.4 seconds, which was 2.6 seconds less than her practice time. Write and solve an equation to find Heather's practice time. Show that your answer is reasonable.

16. The radius of Earth is 6378.1 km, which is 2981.1 km longer than the radius of Mars. Write and solve an equation to determine the radius of Mars. Show that your answer is reasonable.

Name _____ Date _____ Class _____

LESSON 2-1

Problem Solving

Solving Equations by Adding or Subtracting

Write the correct answer.

1. Michelle withdrew $120 from her bank account. She now has $3345 in her account. Write and solve an equation to find how much money m was in her account before she made the withdrawal.

_____

_____

2. Max lost 23 pounds while on a diet. He now weighs 184 pounds. Write and solve an equation to find his initial weight w.

_____

_____

3. Earth takes 365 days to orbit the Sun. Mars takes 687 days. Write and solve an equation to find how many more days d Mars takes than Earth to orbit the Sun.

_____

_____

4. In 1990, 53.4% of commuters took public transportation in New York City, which was 19.9% greater than the percentage in San Francisco. Write and solve an equation to find what percentage of commuters p took public transportation in San Francisco.

_____

_____

Use the circle graph below to answer questions 5–7. Select the best answer. The circle graph shows the colors for SUVs as percents of the total number of SUVs manufactured in 2000 in North America.

5. The percent of silver SUVs increased by 7.9% between 1998 and 2000. If x% of SUVs were silver in 1998, which equation represents this relationship?

A $x + 7.9 = 14.1$ **C** $7.9x = 14.1$

B $x - 7.9 = 14.1$ **D** $7.9 - x = 14.1$

6. Solve the equation from problem 5. What is the value of x?

F 1.8 **H** 7.1

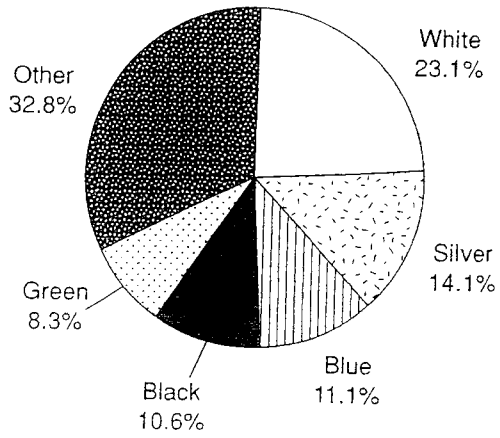
G 6.2 **J** 22

7. The sum of the percents of dark red SUVs and white SUVs was 26.3%. What was the percent of dark red SUVs?

A 2.3% **C** 12.2%

B 3.2% **D** 18%

Percent of SUVs by Color



A Challenge

In 'gebra we use equations to solve problems that are hard to solve in other ways. Here are some problems which can be solved easily using algebra. They can also be solved without using algebra. Work on these problems any way you want. Make a record of how you solved them. Later we will solve problems like these using algebra.

"I'm thinking of a number. If you multiply it by 6 and then add 7, you will get 55. What is my number?"

One number is 5 more than another. Their sum is 53. What are the two numbers?

A shake at the Shake Shack costs 80¢. The bill for three burgers and a shake was $4.40. How much is a burger?

Kim is 15. Kim's father is 39. In how many years will Kim's father be exactly twice as old as Kim will be?

You can ride a bicycle 15 mph. Your sister rides 12 mph. You give her a one hour head start. In how many hours will you catch up if neither of you stops?

The Rag Bag is having a "20% Off" sale. A pair of pants is on sale for $16. How much was it to begin with?

Equations

Here is an equation in x: $10 + x = 3$

We can **solve** this equation by substituting different numbers for x. If we find a number that works, then we have found a **solution** to the equation. The only number that will work in this equation is -7. We can show the solution by writing

$$x = -7$$

Solve each equation by substituting different numbers until you find a solution.

$5 + y = 9$ $y = 4$	$z + 1 = 10$	$3 + w = 4$	$a + 15 = 20$
$10 + x = 17$	$4 + t = 4$	$-6 + r = -16$	$8 + x = 6$
$c + 6 = 5$	$-5 + y = -1$	$c + -8 = -8$	$17 + a = 23$
$-4 + a = -9$	$-3 + m = -13$	$x + -2 = 5$	$4 + e = -4$

Joe picked a number and added 7 to it. The answer was 11. What was the number?

Equation: $x + 7 = 11$

Solution: $x = 4$

Jo picked a number and added 3 to it. The answer was 12. What was the number?

Equation:

Solution:

Chip thought of a number. He added 9 to it. The answer came out to be 14. What was Chip's number?

Equation:

Solution:

Solve each equation.

$6x = 18$ $x = 3$	$4s = 24$	$5x = 30$	
$4y = 8$	$5x = 25$	$3x = -12$	$5s = 0$
$6t = 6$	$-4n = -20$	$8c = -8$	$-10e = -30$
$-7x = -21$	$-2x = 10$	$20x = 80$	$-7m = 7$

Robin multiplied 8 times a number. The answer was 48. What was Robin's number?

Equation:

Solution:

Jerry thought of a number. Then he multiplied it by 5. The answer came out to be 45. What was Jerry's number?

Equation:

Solution:

Jennifer started out with 8 dollars. Then she got some more money for her birthday. She ended up with 15 dollars. How much did she get for her birthday?

Equation:

Solution:

7 times some number is 28. What is the number?

Equation:

Solution:

Solving Equations

The equations on the last two pages are very easy to solve. For example, we just have to look at

$$5x = 30$$

to tell that the solution is 6. However, not all equations are that simple. What if we had to solve this one?

$$5x - 3 = 2x + 9$$

One way we can try to solve this equation is by substituting different numbers for x and seeing if they work. Let's see if we can find a number that works.

Let's try **1**:

$5x - 3$	$2x + 9$
$5(1) - 3$	$2(1) + 9$
$5 - 3$	$2 + 9$
2	11

These two numbers are not the same, so **1** is not the solution.

Try **2**:

$5x - 3$	$2x + 9$
$5(2) - 3$	$2(2) + 9$
$10 - 3$	$4 + 9$
7	13

2 doesn't work.

Try **3**:

$5x - 3$	$2x + 9$
$5(3) - 3$	$2(3) + 9$
$15 - 3$	$6 + 9$
12	15

3 doesn't work.

Try **4**:

$5x - 3$	$2x + 9$
$5(4) - 3$	$2(4) + 9$
$20 - 3$	$8 + 9$
17	17

Both sides came out the same, so **4** is the solution.

Use a pencil and eraser when you do these problems. Try to find the solution to each equation by substituting different numbers until you find one that works.

$$4x + 8 = 20$$

$4x + 8$	20
$4(3) + 8$	
$12 + 8$	
20	

C

The solution is 3.

$$6x - 8 = 22$$

The solution is _____.

$9x - 30 = 6$

$9(4) - 30$	6
$36 - 30$	
6	

✓

The solution is 4.

$3x + 13 = 43$

The solution is ____.

$8x - 13 = 27$

The solution is ____.

$5x + 9 = 8x$

$5(3) + 9$	$8(3)$
$15 + 9$	24
24	

✓

The solution is 3.

$6x - 10 = 4x$

The solution is ____.

$4x + 15 = 9x$

The solution is ____.

$4x + 3x = 42$

$4(6) + 3(6)$	42
$24 + 18$	
42	

✓

The solution is 6.

$7x + 4x = 33$

The solution is ____.

$8x - 6x = -18$

The solution is ____.

$7x - 12 = 4x + 6$

$7(6) - 12$	$4(6) + 6$
$42 - 12$	$24 + 6$
30	30

✓

The solution is 6.

$3x + 5 = 2x + 13$

The solution is ____.

$3x - 17 = 7x - 9$

The solution is ____.

Did you find solutions to all the equations? Well, don't worry if you didn't. Guessing is a fine way to solve short equations, but it doesn't work well on long ones. The rest of this booklet will show you how to solve many kinds of equations — short ones and long ones, too.

Equivalent Equations

Look at this equation:

$$2x + 3x + 5x = 20$$

We already know that $2x + 3x + 5x$ can be simplified to $10x$. So the equation above can be rewritten as

$$10x = 20$$

Now it is easy to see that the solution to each of these equations is 2.

$10x = 20$	
$10(2)$	20
20	

✓

$2x + 3x + 5x = 20$	
$2(2) + 3(2) + 5(2)$	20
$4 + 6 + 10$	
20	

✓

Whenever two equations have the same solution, we say that they are **equivalent equations**. Since $2x + 3x + 5x = 20$ and $10x = 20$ both have the solution 2, they are equivalent equations.

When we are solving an equation, we do it in **steps**. Each step is an equivalent equation that is easier to solve. In our last step, the equation is so simple that it tells us the solution. Here are some examples:

$2x + 3x + 5x = 20$	$5x - 3x = 4 + 10$	$12 - 36 = 13y - 7y$
$10x = 20$	$2x = 14$	$-24 = 6y$
$x = 2$	$x = 7$	$y = -4$

Here are some equations for you to solve. Each problem takes two steps. First simplify the equation by combining like terms. Then find the solution.

$5x + 2x = -21$ $7x = -21$ $x = -3$	$2x + 3x = 30$	$3x + 3x = -24$	$5x + 5x = -70$
$4x + 5x = 18$	$7x - 3x = -12$	$8x - 14x = 60$	$3x + x = 36$
$5x = 13 + 7$ $5x = 20$ $x = 4$	$3x = 10 + 2$	$-4x = 19 + 9$	$7x = 30 + 40$
$6x = 5 - 17$	$8x = 30 - 6$	$2x = 23 - 23$	$3x = 11 + 22$
$56 = 2x - 9x$ $56 = -7x$ $x = -8$	$77 = 6t + 5t$	$49 - 9 = 5a$ $40 = 5a$ $a = 8$	$17 + 3 = 4x$
$18 = 7s + 2s$	$15 = 3m - 8m$	$20 - 44 = 8x$	$37 - 30 = 7x$
$20 = 7y - 12y$	$18 = 9t - 3t$	$5 + 13 = -9w$	$48 + 16 = 32y$

Name _____ 10/9 Algebra Quiz

) $20 = 7y - 12y$

(2) $6x = 5 - 17$

(3) 75 is 12% of what number?

(4) $4x - \frac{1}{2}(8x + 1) + x$

(5) $-4(x + 2y) + y$

(6) $2y^2 - y + 5$
evaluate if $y = 3$

Rewrite

Algebraic Fractions name: _____

Division

* Remember to multiply by the reciprical and simplify!

1) $\frac{3m^2}{n} \div \frac{9m}{7m} =$

2) $\frac{10x^2y}{5y} \div \frac{30x^2y}{5y} =$

3) $\frac{59y}{9x} \div \frac{7y}{3x^2} =$

4) $\frac{49x^2z}{5y^5} \div \frac{7xz}{y^4} =$

5) $\frac{22a^3}{7b} \div \frac{11a^2}{21b}$

6) $\frac{9x^2}{10y^2} \div \frac{3x}{14y^3}$

7) $\frac{24c}{5d} \div \frac{21}{20d^6}$

8) $\frac{50x^2}{9x} \div \frac{25yx^2}{18x^8}$

9) Make your own algebraic fraction and solve it.

Cooperating Teacher: Ms McNalley

Date: October 16, 2008

Class Title: Algebra

Class Time: 8:00 – 11:00 am

Topic of the Lesson: Exponents

A summary of Teaching Techniques Used:

This day in Ms. McNalley's class, myself and a fellow classmate, William Clarke, were told that we were to teach a lesson on exponents. To do this William and I prepared a lesson that was similar to Ms. McNalley's class. We did a class starter on the white board related to exponents. Then we worked at first on a guided practice sheet as a class. Then it was my wish to have the class finish this worksheet. After completing the worksheet the students would have discovered the multiplication property of like based exponents, i.e. the bases stay the same, but you add the exponents. (See the attached worksheet). Then after the first class from 8:00 – 9:00 am, William and I had a prep period which we needed. The reason for this was to change some of the vocabulary I used in creating the worksheet for the students. Then after doing so, we made copies and were ready for the next class from 10:00 – 11:00 am.

This was the second class that William Clarke and I would be teaching this day. We were told to prep the same way for this class as we did for the first class. However, after I took over the first class, I felt it fair to let William take over this one which I felt he did so wonderfully.

A Summary of Classroom Management Strategies Used:

The classroom management strategies I used were to have the students work as a class at first, then to work alone. To get the students' attention, all I had to do was speak clearly in an elevated volume. I believe because I was "new" the students did not give me any problems.

The classroom management strategies William used were the same as mine, to have the students work as a class at first, then to work alone. To get the students' attention, all he had to do was speak clearly in an elevated volume. I believe because William is a larger young man, and that he was "new" the students did not give him any problems.

A Summary of Other "Interesting" Observations:

The most interesting thing that I noticed about this class was my co-teacher, William Clarke. Since I was "on a roll" with teaching, he let me teach this first class by myself, and he acted as if he was an aid.

Personal Reflection
October 16, 2008

Today was amazing! William Clarke, a peer of mine, and I, were able to co-teach two classes. The lesson that we taught was on exponents. I feel as if the students were able to take a lot from our lesson. My whole goal was to have the students discover the formula rather than us just giving them notes. I feel that this goal was achieved by having the worksheet set up in the way that I did. At the end of teaching, Ms. McNalley was very impressed and said that we did a great job. I felt great about today.

Name_____ Date:_____

Discovery Worksheet 4-2 a

STEP 1:

Fill in the following table by following the first example:

$3^2 \bullet 3^3$	$(3 \bullet 3)(3 \bullet 3 \bullet 3)$	3^5
$5^4 \bullet 5^2$		
$4^3 \bullet 4^3$		
$2^3 \bullet 2^2$		
$6^3 \bullet 6^4$		

From the completed table, answer the following questions:

1) Examine your completed table. Look at the two exponents in each factor and the exponent in the final answer. What pattern do you notice?

2) Use your pattern to make a rule: $a^m \bullet a^n = ?$

STEP 2:

Use your rule to write each product below as a single power.

1) $5^3 \bullet 5^5$ 2) $7^2 \bullet 7^2$ 3) $10^8 \bullet 10^4$ 4) $8^7 \bullet 8^3$

Fill in the table below similarly to the one above to explore what happens when you multiply more than two powers that have the same base. Then write whether or not you think your rule still holds true in words to summarize what you find.

$5^3 \bullet 5^5$		
$7^2 \bullet 7^2$		
$10^8 \bullet 10^4$		
$8^7 \bullet 8^3$		

Cooperating Teacher: Ms. McNalley

Date: October 21, 2008

Class Title: Algebra

Class Time: 8:00 – 9:00 am

Topic of the Lesson: Exponents

A summary of Teaching Techniques Used:

This day in Ms. McNalley's class, myself and a fellow classmate, William Clarke, were told that we were to teach a lesson on exponents. To do this William and I prepared a lesson that was similar to Ms. McNalley's class. We did a class starter on the white board related to exponents. Then we worked at first on a guided practice sheet as a class. After using the first problem as an example on which we worked on as a class, the students were to finish the rest of the worksheet by themselves individually. After completing the worksheet the students would have discovered the multiplication property of a base raised to power, then raised to that power again, i.e. the bases stay the same, but you multiply the exponents. (See the attached worksheet).

A Summary of Classroom Management Strategies Used:

The classroom management strategies I used were similar to the first time William and I co-taught. At first, I wanted to have the students work as a class, then to work alone. To get the students attention, all I had to do was speak clearly in an elevated volume again. I believe that I have a tone of voice in which it demands attention when I make it sound that way.

A Summary of Other "Interesting" Observations:

The most interesting thing that I noticed about this class was my co-teacher, William Clarke. Since we have worked together before, I could jump in when I wanted and he could do likewise, it worked out great. I feel as if William and I make a good team.

Cooperating Teacher: Mr. Chappin

Date: October 21, 2008

Class Title: Mathematics Skills

Class Time: 9:00 – 10:00 am

Topic of the Lesson: Various Arithmetic Topics

A summary of Teaching Techniques Used:

This was the second class at Hillsborough-Deering Middle School in which I have seen topics based course in which the students are to work on packets, and the teacher is more of an aid than a teacher. However, I feel that Mr. Chappin did an amazing job with the students. The students were working on basic arithmetic rules. Each table of students was working on the same material, and Mr. Chappin had control of the class.

A Summary of Classroom Management Strategies Used:

Besides having the classroom set up in groups in which each group would be working on the same material at their own pace, Mr. Chappin used some very effective strategies to keep a difficult class on task. When a student acted up he would address it immediately between himself and the individual student so no one else could hear. When a student acted up too much, he told the student to wait for him out in the hallway. It is there where he would have a discussion about the student's actions with the student.

A Summary of Other "Interesting" Observations:

The interesting thing that I noticed about this class was that at the end of the class the students would rate their behavior during the class on a scale of 1-5. This was the student's participation for the day. Each student can agree or disagree with another student, and Mr. Chappin can disagree or agree with the student. If the student had to be spoken to, they could not receive the maximum amount of points. This was an effective tool to keep students in line, most of them that is.

Cooperating Teacher: Ms. McNalley

Date: October 21, 2008

Class Title: Algebra

Class Time: 10:00 – 11:00 am

Topic of the Lesson: Exponents

A summary of Teaching Techniques Used:

This was the second class that William Clarke and I would be teaching this day. We were told to prep the same way for this class as we did for the first class. Similarly to the earlier class of the day, William and I were able to jump in at different points to make the teaching as clear as possible.

A Summary of Classroom Management Strategies Used:

The classroom management strategies William and I used were the same as the previous class of this day.

A Summary of Other "Interesting" Observations:

Nothing interested was noticed about this lesson.

Personal Reflection
October 21, 2008

Today was another day in which William Clarke and I were able to co-teach Ms. McNalley's classes. We went with the same styled approach, because this is how the students are used to class running. We had another exponent rule to teach and we used the same style of a discovery worksheet to do so. Again, we were told that we did a great job by Ms. McNalley. I really enjoy teaching and am really enjoying the chance to experience it.

The other part of the day that I was really impressed by was Mr. Chappin's classroom management. The class that I observed was one in which I would classify as being very difficult. Not only did he do a great job with them, but all the students stayed on task. I was blown away. I can only hope to aspire to have as good of control of the class I teach like he did.

Name_____ Date:_____

Discovery Worksheet 4-2 b.

STEP 1:

Fill in the table by following the first example:

$(2^3)^2$	$(2^3)(2^3)$	$(2 \bullet 2 \bullet 2)(2 \bullet 2 \bullet 2)$	2^6
$(2^2)^3$			
$(4^2)^4$			
$(3^4)^2$			
$(6^3)^4$			

From the completed table, answer the following questions:

1) Examine your completed table. Look at the two exponents in the original expression and the exponent in the final answer. What patter do you notice?

2) Use your pattern to make a rule: $(a^m)^n = ?$

STEP 2:

Use your rule to write each product below as a single power.

1) $(5^3)^2$ 2) $(7^2)^2$ 3) $(3^3)^4$ 4) $(9^7)^3$

What do you think will happen when you raise a power to two powers, for example, $\left[(4^2)^3\right]^3$? Write whether or not your rule holds by what you have seen in steps 1 and 2.

Cooperating Teacher: Ms. McNalley

Date: October 23, 2008

Class Title: Algebra

Class Time: 8:00 – 9:00 am

Topic of the Lesson: Exponents

A summary of Teaching Techniques Used:

This was a typical lesson from Ms. McNalley. The class started off with a class starter related to exponents. After working through all the problems as a class, the students were then to work on guided practice that was done by using a Promethean Board. This is a piece of technology that I have never seen before and was impressed. The main feature that Ms. McNalley was using it for was to be able to print everything that she had written on the board for students who were absent. After working on the guided practice, the students did a worksheet. If the students did not finish, it was to be their homework.

A Summary of Classroom Management Strategies Used:

There were no new classroom management strategies seen today which have not already been discussed in other observations previous to this one.

A Summary of Other "Interesting" Observations:

The most interesting thing was after class; Ms. McNalley taught me how to use the Promethean Board.

Cooperating Teacher: Mr. Chappin

Date: October 23, 2008

Class Title: Topics in Mathematics

Class Time: 9:00 – 10:00 am

Topic of the Lesson: Various Mathematics Topics

A summary of Teaching Techniques Used:

This class was the same as the previously observed class from Mr. Chappin. Students started off with a class starter and then continued working on their own individual packet. However, I was able to obtain the type of arithmetic packets that they worked on. These can be seen in the attached.

A Summary of Classroom Management Strategies Used:

Again, Mr. Chappin displayed amazing classroom management today. He is dealing with a class in which I feel, the students do not want to be there, and thus are more likely to get off of task. Mr. Chappin does a great job of dealing with students by talking to them individually about their choices they are making and getting the students to complete their work. Again, if needed, he took a student out into the hall to have a private discussion about their actions.

A Summary of Other "Interesting" Observations:

Today, while the students were working I noticed that the majority of them have still not mastered their multiplication tables and used a physical table to complete basic multiplication. I feel as if this is a topic that should have been mastered in elementary school. However, Mr. Chappin said that his plan was to little by little get rid of the tables. This made me feel better about having the students use the tables.

Cooperating Teacher: Ms. McNalley

Date: October 23, 2008

Class Title: Algebra

Class Time: 10:00 – 11:00 am

Topic of the Lesson: Exponents

A summary of Teaching Techniques Used:

This class was set up in the same way as the previous class I observed from Ms. McNalley today. By this I mean the structure was the same:

- Class Starter dealing with exponents
- Guided Practice on the Promethean Board
- Extra practice with a worksheet
- What the students did not finish in this class was to be completed for homework.

A Summary of Classroom Management Strategies Used:

There were no new classroom management strategies seen today which have not already been discussed in other observations previous to this one.

A Summary of Other "Interesting" Observations:

Similarly, after this class Ms. McNalley allowed me to explore the Promethean Board to see some of its capabilities. What an amazing piece of technology!

Personal Reflection
October 23, 2008

Today was another typical day in Ms. McNalley's room. She stuck with her typical structure of a class starter, then reviewing homework, then giving guided practice, then giving homework and the remainder of class time to start the homework. I do not feel as if there is anything wrong with this set up, except for the fact that some of the students may find it boring. I know I personally would like to change things up a little from day to day.

Mr. Chappin's classroom again was a difficult one behaviorally. However, he did another wonderful job with keeping his students on task. Even though students are all at different points working on different material in different packets, he seems to know where every student is and what they should be doing for that class period. This astounds me.

The best part of the day was learning about a new piece of technology, the Promethean Board. This interactive whiteboard connects to a computer and a projector and whatever you write on the board with a stylus shows up, both on the screen and on the computer. I feel that this is a great way to give and save notes for students who are absent. The capabilities of the board also feature navigation of the computer with using the stylus as a mouse and pointing to click on objects on the screen. This is an amazing tool for the classroom.

Name _____ Date _____

LESSON 8.3

Practice C

For use with pages 502–508

Evaluate the expression.

1. $3^{-4} \cdot 3^{-1}$
2. $9^{-4} \cdot 9^{8}$
3. $(5^{-1})^{4}$
4. $\dfrac{1}{10^{-5}}$
5. $\dfrac{5^{-6}}{5^{-9}}$
6. $\dfrac{8^{-10}}{8^{-8}}$
7. $15\left(\dfrac{3}{5}\right)^{-1}$
8. $32\left(\dfrac{2^{-4}}{2^{3}}\right)$
9. $4 - 2 \cdot \left(\dfrac{7}{12^{0}}\right)$

Simplify the expression. Write your answer using only positive exponents.

10. $(4x^{-3}y^{4})^{-2}$
11. $\dfrac{1}{9x^{-4}y^{-8}}$
12. $\dfrac{1}{6x^{4}y^{-10}}$
13. $\dfrac{1}{(4x^{-5})^{-2}}$
14. $\dfrac{8}{(-2d^{2})^{-4}}$
15. $\dfrac{(2x)^{-4}y^{8}}{-x^{5}y^{-3}}$
16. $\dfrac{x^{-6}y^{4}}{(-3x^{2})^{-4}y^{-1}}$
17. $\dfrac{20x^{3}y^{-4}}{(2x^{-4}y^{-1})^{2}}$
18. $\dfrac{(4x^{-4}y^{7})^{2}}{24x^{-6}y^{2}}$

Name _____ Date _____

9 × 1	6 × 6	1 × 9	9 × 4	1 × 3	5 × 1	7 × 1	6 × 2	3 × 8	5 × 0
5 × 6	0 × 6	2 × 8	0 × 9	1 × 7	1 × 0	4 × 6	6 × 3	3 × 2	9 × 6
7 × 7	2 × 4	7 × 4	4 × 8	0 × 3	4 × 0	8 × 1	2 × 5	3 × 4	7 × 6
2 × 0	9 × 7	9 × 2	3 × 1	4 × 7	5 × 5	1 × 2	8 × 6	8 × 7	5 × 8
0 × 2	8 × 2	1 × 1	8 × 3	3 × 9	1 × 4	5 × 2	4 × 9	7 × 5	9 × 8
6 × 7	0 × 7	9 × 9	0 × 4	1 × 8	7 × 3	3 × 7	2 × 3	1 × 5	2 × 2
2 × 7	4 × 1	8 × 4	9 × 0	6 × 5	0 × 5	5 × 9	8 × 5	3 × 0	7 × 2
7 × 9	3 × 3	8 × 0	6 × 4	7 × 0	0 × 0	6 × 9	0 × 8	2 × 6	0 × 1
2 × 9	3 × 6	3 × 5	8 × 9	4 × 2	1 × 6	4 × 3	5 × 7	7 × 8	4 × 5
4 × 4	5 × 4	6 × 1	6 × 8	9 × 5	6 × 0	8 × 8	5 × 3	2 × 1	9 × 3

Name _____ Date _____

2 × 3	8 × 2	5 × 7	3 × 4	4 × 3	4 × 4	1 × 4	9 × 9	8 × 8	8 × 4
2 × 5	0 × 3	1 × 7	9 × 4	4 × 7	6 × 4	3 × 6	6 × 5	9 × 0	6 × 8
3 × 1	8 × 6	1 × 3	3 × 2	4 × 8	8 × 1	5 × 1	8 × 9	7 × 0	7 × 3
7 × 1	6 × 0	7 × 7	0 × 2	0 × 6	2 × 6	2 × 9	5 × 3	6 × 1	9 × 7
3 × 7	3 × 3	0 × 7	5 × 4	8 × 7	9 × 6	1 × 9	8 × 0	5 × 8	0 × 8
9 × 5	5 × 0	1 × 8	3 × 5	7 × 2	3 × 9	6 × 3	9 × 3	0 × 0	2 × 0
2 × 2	4 × 0	4 × 1	2 × 1	4 × 5	6 × 9	7 × 6	1 × 1	2 × 8	5 × 6
0 × 4	4 × 2	1 × 0	7 × 4	0 × 5	3 × 0	4 × 9	8 × 5	5 × 5	0 × 9
7 × 5	6 × 2	7 × 8	3 × 8	9 × 8	5 × 9	1 × 6	9 × 1	1 × 2	8 × 3
2 × 4	1 × 5	4 × 6	6 × 6	9 × 2	2 × 7	6 × 7	5 × 2	0 × 1	7 × 9

Name _____ Date _____

0 ÷ 7 =	45 ÷ 9 =	3 ÷ 1 =	6 ÷ 1 =	27 ÷ 9 =
63 ÷ 9 =	20 ÷ 5 =	30 ÷ 6 =	54 ÷ 9 =	81 ÷ 9 =
27 ÷ 3 =	24 ÷ 4 =	0 ÷ 8 =	56 ÷ 7 =	8 ÷ 1 =
18 ÷ 3 =	1 ÷ 1 =	4 ÷ 2 =	10 ÷ 5 =	8 ÷ 8 =
20 ÷ 4 =	16 ÷ 4 =	12 ÷ 3 =	40 ÷ 5 =	6 ÷ 2 =
16 ÷ 2 =	30 ÷ 5 =	15 ÷ 5 =	72 ÷ 8 =	0 ÷ 6 =
12 ÷ 2 =	2 ÷ 1 =	9 ÷ 3 =	4 ÷ 4 =	4 ÷ 1 =
8 ÷ 4 =	36 ÷ 4 =	49 ÷ 7 =	6 ÷ 6 =	48 ÷ 6 =
7 ÷ 7 =	42 ÷ 6 =	16 ÷ 8 =	7 ÷ 1 =	10 ÷ 2 =
63 ÷ 7 =	64 ÷ 8 =	25 ÷ 5 =	36 ÷ 6 =	54 ÷ 6 =
5 ÷ 5 =	72 ÷ 9 =	3 ÷ 3 =	9 ÷ 1 =	18 ÷ 9 =
32 ÷ 8 =	24 ÷ 8 =	48 ÷ 8 =	24 ÷ 6 =	0 ÷ 9 =
40 ÷ 8 =	14 ÷ 2 =	0 ÷ 1 =	32 ÷ 4 =	8 ÷ 2 =
28 ÷ 4 =	0 ÷ 3 =	0 ÷ 5 =	18 ÷ 6 =	12 ÷ 6 =
0 ÷ 4 =	12 ÷ 4 =	14 ÷ 7 =	28 ÷ 7 =	36 ÷ 9 =
9 ÷ 9 =	35 ÷ 7 =	42 ÷ 7 =	21 ÷ 3 =	21 ÷ 7 =
0 ÷ 2 =	2 ÷ 2 =	15 ÷ 3 =	5 ÷ 1 =	35 ÷ 5 =
18 ÷ 2 =	56 ÷ 8 =	24 ÷ 3 =	45 ÷ 5 =	6 ÷ 3 =

Name: _____ Date: _____

Directions: Please show all work. Simplify these expressions.

a. $\frac{15x}{2y^2} \cdot \frac{12y^3}{20x}$

b. $\frac{13x^4}{2xy^2} \cdot \frac{14y^8}{39x^2y}$

c. $\frac{38x^4y}{2x^3y^2} \cdot \frac{12x^3y^4}{19x^2y}$

d. $\frac{13x^4}{2xy^2} \cdot \frac{4y^8}{26x^2y} \cdot \frac{4xy}{16x^3y^5}$

e. $\frac{12m^2n^3}{3mn^2} \cdot \frac{4t^7}{25m^2nt^3} \cdot \frac{5mnt}{24n^3t^5}$

f. $\frac{12p^2t^3}{3pt^2} \cdot \frac{4t^7}{25p^2t^3} \div \frac{20pt}{15n^3t^5}$

g. $\frac{20x^{-6}}{2y^{-2}} \cdot \frac{8y^3}{45x^{-3}}$

Cooperating Teacher: Mr. McCandless

Date: November 13, 2008

Class Title: Geometry

Class Time: 7:30 – 9:00 am

Topic of the Lesson: Review for test

A summary of Teaching Techniques Used:

During this class period, Mr. McCandless taught a traditional high school course in the techniques used. The entire class period was used to work on a review packet that covered the chapter that the students were working on. When a question arose, if it was one which a lot of the students needed help on, he worked it out on the board. If it was a problem that just an individual student was having, he worked one on one with that student.

A Summary of Classroom Management Strategies Used:

Mr. McCandless' class seemed pretty loose. By this I mean that the students were able to chat quietly amongst themselves as long as it was during quiet work time. However, when Mr. McCandless was teaching or going over something, he waited for everyone to be quiet.

A Summary of Other "Interesting" Observations:

This seemed to me like a typical review class before a chapter test at a high school setting.

Cooperating Teacher: Mr. McCandless

Date: November 13, 2008

Class Title: Probability and Statistics

Class Time: 9:00 – 10:30

Topic of the Lesson: Modeling Data

A summary of Teaching Techniques Used:

Mr. McCandless again had a typical traditional high school class structure to this class. He started off by taking attendance and then discussing the reading from the night before. With this he allowed the students to decide as a group how they would review the material. The students decided on a group discussion. After this, Mr. McCandless handed out a new packet in which the students used TI Graphing Calculators to model some data with the graphing capability. Then the students were to complete the guided practice. If this was done, the student could work on the homework questions in the packet.

A Summary of Classroom Management Strategies Used:

Mr. McCandless again had a very loose class structure. Again however, it seemed as if the students understood that when he, or another student was presenting information, that they were to be quiet and attentive. If a student was not, Mr. McCandless would simply say the student's name. This worked for this class. When it was time to work on guided practice and homework problems, the students could talk quietly, as long as they were getting work done. Mr. McCandless, even though having a "loose" class also knew where every student was on their work.

A Summary of Other "Interesting" Observations:

I found this class interesting in that it does not have text books. Instead Mr. McCandless copies chapters out of various texts that he has. It is a new class at Hillsborough-Deering High School, and I feel that Mr. McCandless is working his hardest on with the resources he has.

Personal Reflection
November 13, 2008

This was the first day at the high school. It is a lot smaller than I had pictured it, however, right away; I knew that I would want to teach at this level. The classes that I was able to observe today were taught by Mr. McCandless. The first class was geometry. Unfortunately, it was the class period before a chapter test, so the students were reviewing for it. However, I feel as if I would also use a class period to do a review of the material about to be tested on. I feel that it is good for the students. The next class that day that I was able to observe was probability and Statistics.

It was here where I was able to observe some ways Mr. McCandless taught. He is a laid back teacher who does not mind to be side tracked a little bit. I feel that this method worked for Mr. McCandless because it seems to fit his personality. The students have a good grasp on when it is ok to chat a little bit and when they need to get work done. One thing that I did not like about this class was the way students reviewed what they had read the night before. It was like a big sharing circle of what they liked and did not like. I would have felt it would have been more beneficial to outline the chapter and take a few notes while discussing it. Overall, it was a great first day in the high school.

Cooperating Teacher: Mr. McCandless

Date: November 18, 2008

Class Title: Geometry

Class Time: 7:30 – 9:00 am

Topic of the Lesson: Special Right Triangles

A summary of Teaching Techniques Used:

This class was structured in a very traditional high school setting. First, Mr. McCandless took attendance and then went over any questions the students had on the homework. After this, he gave notes on special right triangles. In particular, he gave notes on the measures of the sides of 45-45-90 and 30-60-90 triangles. After this Mr. McCandless introduced a project that the students were to finish in about a weeks time. Next, the remainder of the class was for the students to start their homework and have their questions that they had on it answered by Mr. McCandless.

A Summary of Classroom Management Strategies Used:

No new classroom management strategies were used by Mr. McCandless since the last observation.

A Summary of Other "Interesting" Observations:

Nothing was noted as interesting during this class period.

Cooperating Teacher: Mr. McCandless

Date: November 18, 2008

Class Title: Probability and Statistics

Class Time: 9:00 – 10:30 am

Topic of the Lesson: Randomness and Random Variables

A summary of Teaching Techniques Used:

Mr. McCandless introduced the topic of the day which was randomness and random variables. Then he handed out the reading that was to be done for homework about the topic. Next Mr. McCandless had the students work in groups to work on a problem. This problem was handed into Mr. McCandless for a grade. Next, Mr. McCandless played a video on how cigarette smoking and deaths could not be really proven; only a strong relationship can be made by statistics. The remainder of the class period was for the students to start the reading and do the homework problems.

A Summary of Classroom Management Strategies Used:

No new classroom management strategies were used by Mr. McCandless since the last observation.

A Summary of Other "Interesting" Observations:

The only interesting observation I had was that the video played by Mr. McCandless was not at all interesting. It was very old and many of the students put their heads down and went to sleep. Mr. McCandless did not say anything to those students.

Personal Reflection
November 18, 2008

This was a typical day at a high school setting I felt. Mr. McCandless' geometry class was going over special right triangles. I find it interesting that Mr. McCandless does not give any formal notes. The students are to use their textbook as a reference. I would not do the same thing. I would have the students take formal notes as well as read the chapter. I feel that this way the more times the students are exposed to the material, the more likely they are to pick up on key ideas and concepts. One thing that I did like about Mr. McCandless' probability and statistics class though was today he had the students work in groups to solve particular problems. This agrees with my teaching philosophy in that students should work together, on some things, to solve their problems. Overall it was another good day.

Cooperating Teacher: Mr. McCandless

Date: November 20, 2008

Class Title: Geometry

Class Time: 7:30 – 9:00 am

Topic of the Lesson: Geometric Mean

A summary of Teaching Techniques Used:

Mr. McCandless started off this class in his typical way of taking attendance and going over homework. After this was done and the students had their questions answered, Mr. McCandless gave notes about the Geometric Mean. The students were then given guided practice on the material. Also in the guided practice, information was reviewed about special right triangles, information taught in a previous class. Then the remainder of the class period, students was to work on their homework or on a project assigned previously by Mr. McCandless.

A Summary of Classroom Management Strategies Used:

No new classroom management strategies were used by Mr. McCandless since the last observation.

A Summary of Other "Interesting" Observations:

The "interesting" that I see with having a block class of 90 minutes is that if a teacher tries to present more than one mathematical topic which is new, the students either do not absorb the information or are still worrying about the previous topic taught during that period. I do not feel as if block scheduling and semester long classes are beneficial to high school students.

Cooperating Teacher: Mrs. Perrin

Date: November 20, 2008

Class Title: Algebra

Class Time: 9:00 – 10:00

Topic of the Lesson: Graphing Linear Equations

A summary of Teaching Techniques Used:

Mrs. Perrin started off class by collecting the homework. Then she had the students partner up and take a group quiz. She used a computer and a projector to put up equations and the students were to identify the slope and y intercept and then put the equation into slope-intercept form and then graph. After this was done, she had one student from each group go to the board and put up the answer. From this everyone went through the answers and correct mistakes on the board and on their paper. This took until the end of the period.

A Summary of Classroom Management Strategies Used:

Mrs. Perrin dealt with classroom management in ways in which I have not observed before. When dealing with individual students who were acting out or off task, she did not say anything, however, she did stop what she was doing and made eye contact with the student and then continued on with the lesson. This seemed effective except for some of the students. For the students with whom this was not effective she would say the person's name and ask them to please stop the behavior that was not desired. This seemed to work. Mrs. Perrin also made the students pay attention by threatening having more homework or having an after school detention.

A Summary of Other "Interesting" Observations:

Being in this class was interesting in itself. The reason for this is it is a high school course, however it is what Hillsborough-Deering High School calls its Freshman Academy. What this means is that only freshman are in that particular class. In fact the entire freshmen are in the Freshman Academy. Also, the Freshman Academy is not on block scheduling, but on hour long class periods. This, I was told, was to help students adjust to high school.

Cooperating Teacher: Mrs. Perrin

Date: November 20, 2008

Class Title: Honors Geometry

Class Time: 10:00 – 10:30 am

Topic of the Lesson: Triangle Congruency Proofs

A summary of Teaching Techniques Used:

This class was interesting in that I was only able to observe half of the class due to my own personal time restraints. The class started out by going over the homework from the night before. Then Mrs. Perrin collected the homework and said she would grade it and hand it back later. Next, the class was to work on triangle congruency proofs in groups of 2 or 3. This took the class until the time in which I needed to leave.

A Summary of Classroom Management Strategies Used:

No new classroom management strategies were used by Mrs. Perrin since the last observation.

A Summary of Other "Interesting" Observations:

The students in this honors course, even though they complained about proofs, had a good grasp of two column proof writing techniques.

Personal Reflection
November 20, 2008

I felt that this was another good day at the high school. It started off like any other day observing had with Mr. McCandless' geometry class. The day's lesson was geometric mean. The way in which it was presented was nothing like I have seen before. He used figures of triangles on the board and showed how the sides were related and had the students work on guided practice. The way in which he presented the concept will be a way that I will look back upon if I am to teach the topic of geometric mean.

After that class I was able to meet and observe another new teacher. Mrs. Perrin was the teacher I got to observe for the rest of the day. She is the mathematics teacher for the freshman academy. Basically what that means is at Hillsborough-Deering High School, the freshmen are all in the same classes together. Mrs. Perrin teaches all the freshman mathematics. Mrs. Perrin has good classroom management and she is very energetic. I feel that this is good because the students tend to get energized about the topics when she is. This is something that I hope I will be able to convey to my students, that is positive energy about the material.

Cooperating Teacher: Mrs. Perrin

Date: November 25, 2008

Class Title: Honors Geometry

Class Time: 8:00 – 9:00 am

Topic of the Lesson: Triangle Properties

A summary of Teaching Techniques Used:

This class started out by the students taking out their textbooks and notebooks and taking notes on a chapter. Mrs. Perrin highlighted important sections and put pictures of the important topics on the board for the students to see as examples. After this, the class was to continue work on the proof packet in groups (see attached). Then homework was assigned right before the end of the class.

A Summary of Classroom Management Strategies Used:

No new classroom management strategies were used by Mrs. Perrin since the last observation.

A Summary of Other "Interesting" Observations:

The interesting thing about this class that I noticed was that the students took their notes directly out of the textbook while Mrs. Perrin was at the front of the room reading directly from the text book.

Cooperating Teacher: Mrs. Perrin

Date: November 25, 2008

Class Title: Pre-Algebra

Class Time: 9:00 – 10:00 am

Topic of the Lesson: Fractions

A summary of Teaching Techniques Used:

The class period started off by Mrs. Perrin having the students take out their homework and collecting it. This took her quite some time because of certain distractions from people outside in the hallway (i.e. other teachers asking her questions). During this time some of the students seemed more interested in miniature toy skateboards. Mrs. Perrin dealt with this and then had the students partner up and work on multiplication facts. Then the students were to complete and hand in mad minutes. With the remainder of class time, the students were to make a magic square dealing with fractions. Then the students were to make one of their own. With the magic square the students were to create on their own, more points were to be awarded to students if they used mixed fractions.

A Summary of Classroom Management Strategies Used:

This class was full of Mrs. Perrin using a lot of the strategies that she has used in the past, as well as one new one that I observed dealing with the toy miniature skateboards. Mrs. Perrin told the students if they did not put them away, the skateboards would be taken away and not returned until the end of the day. With this the students put them away immediately.

A Summary of Other "Interesting" Observations:

I found this class interesting in that the material that was being covered is material that should be at an elementary school level or a middle school level. High school students who do not know their multiplication facts are something that I thought I would not be exposed to.

Cooperating Teacher: Mrs. Perrin

Date: November 25, 2008

Class Title: Pre-Algebra

Class Time: 10:00 – 10:30

Topic of the Lesson: Fractions

A summary of Teaching Techniques Used:

This class was taught in the same way in which the previous class was taught this day. The schedule was as follows:

- Collect homework
- Partner up and work on multiplication facts
- Complete multiple mad minute worksheets
- Work on magic squares containing fractions

However, I was leaving early this day because of personal commitments and I did not see the finish to the students working on magic squares. Also, in this class, there were two aides in the room that helped out Mrs. Perrin with keeping students on task.

A Summary of Classroom Management Strategies Used:

No new classroom management strategies were used by Mrs. Perrin since the last observation. However, the aides did help in keeping students focused and on task.

A Summary of Other "Interesting" Observations:

There was nothing interesting in this class except for the material being covered. I feel that this type of material should be stressed in earlier grades.

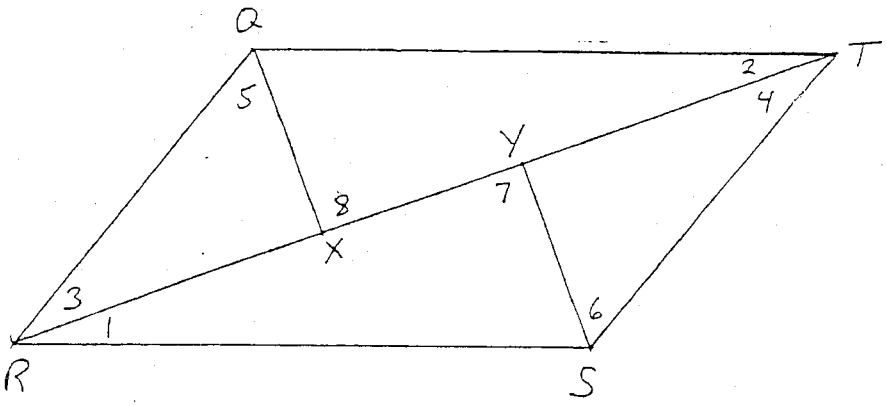
Personal Reflection
November 25, 2008

I am very pleased that the last day of observing has come. After seeing a lot of things along the way I feel anxious for the time when I will be able to teach. I am hoping to take all the things in which I have seen along the way and do the things I like, and try to not do the things which I do not like. Today, I did not like the material that was being taught. Not that the material was bad, I just feel that the material is meant for lower grades, i.e. elementary school and middle school. For example, Mrs. Perrin was doing mad minutes with her students on multiplication tables. I feel that this is something that should have been taught earlier in the students' school career. However, since it was not something the students have mastered, I am very glad that Mrs. Perrin is addressing it. I think if she does not address it, she will just be passing the kids off to the next grade without addressing the issue of not knowing the basic multiplication tables. From these observational experiences, I feel as if I have seen some things which I will try to emulate and other things I will try to stay away from. I feel as if observing has been very beneficial for me as an aspiring teacher.

PROOF EXERCISE

Write a complete and logical proof. Justify each step with a definition, postulate or theorem.

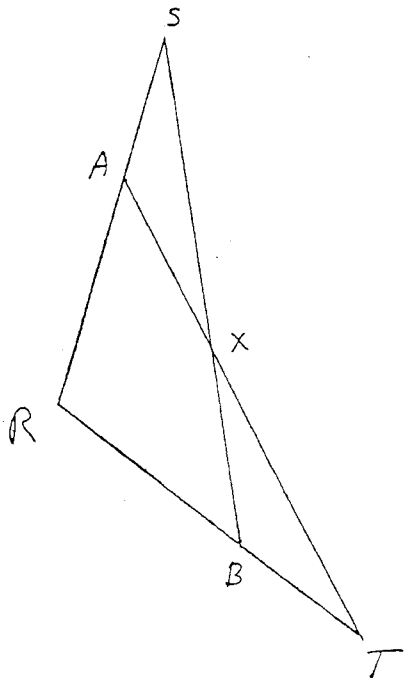
Given: RS = TQ, ST = QR, $\angle 7 = \angle 8$
Prove: QX = SY



PROOF EXERCISE

Write a complete and logical proof. Justify each step with a definition, postulate or theorem.

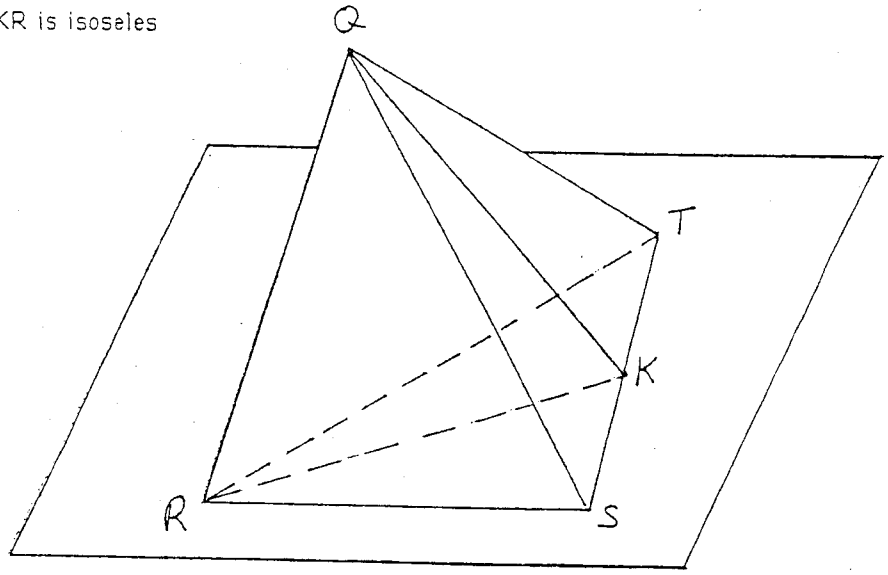
Given: X is the midpoint of SB and AT, SB = AT
Prove: RS = ST RT



PROOF EXERCISE

Write a complete and logical proof. Justify each step with a definition, postulate or theorem.

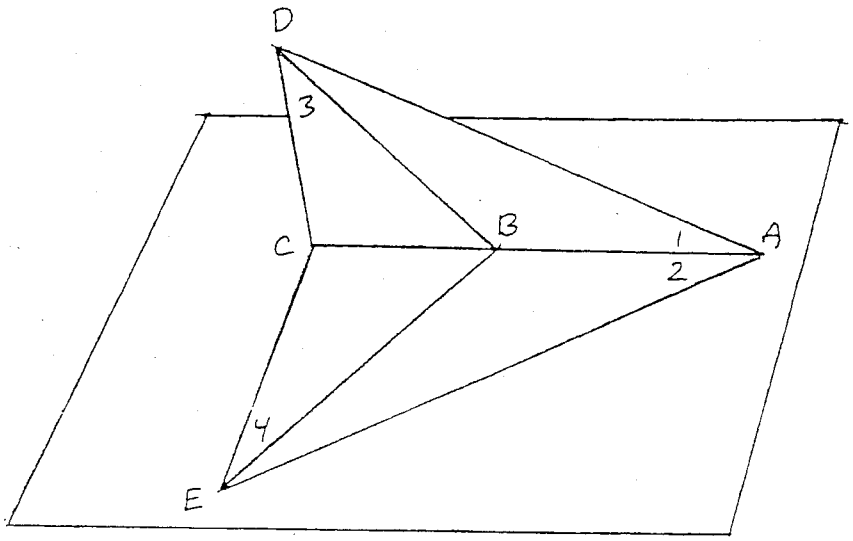
Given: QS = RS, QT = RT
Prove: Triangle QKR is isoseles



PROOF EXERCISE

Write a complete and logical proof. Justify each step with a definition, postulate or theorem.

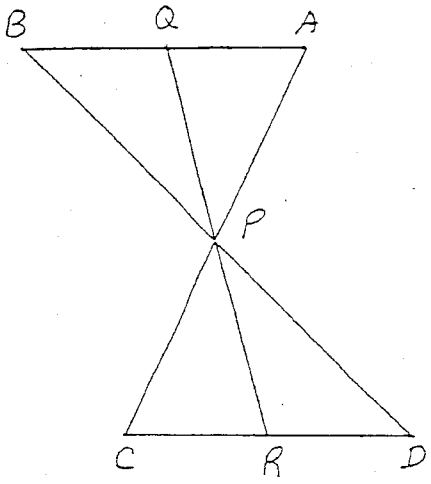
Given: $\angle 1 = \angle 2$, AD = AE
Prove: $\angle 3 = \angle 4$



PROOF EXERCISE

Write a complete and logical proof. Justify each step with a definition, postulate or theorem.

Given: AC and BD bisect each other at P
Prove: P is the midpoint of QR

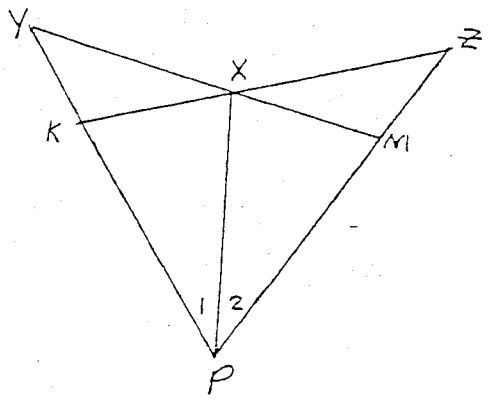


PROOF EXERCISE

Write a complete and logical proof. Justify each step with a definition, postulate or theorem.

Given: $\angle 1 = \angle 2$, $KP = MP$

Prove: $YX = ZX$

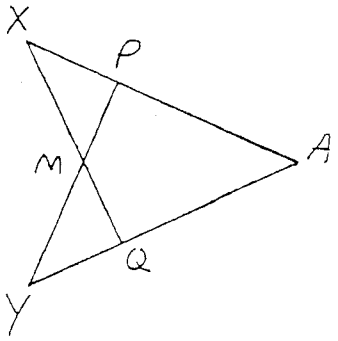


PROOF EXERCISE

Write a complete and logical proof. Justify each step with a definition, postulate or theorem.

Given: M is the midpoint of XQ and YP, XQ = YP

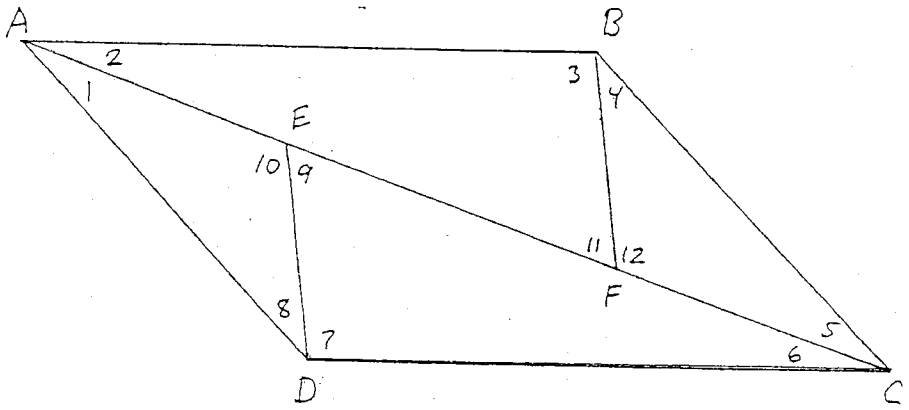
Prove: AX = AY



PROOF EXERCISE

Write a complete and logical proof. Justify each step with a definition, postulate or theorem.

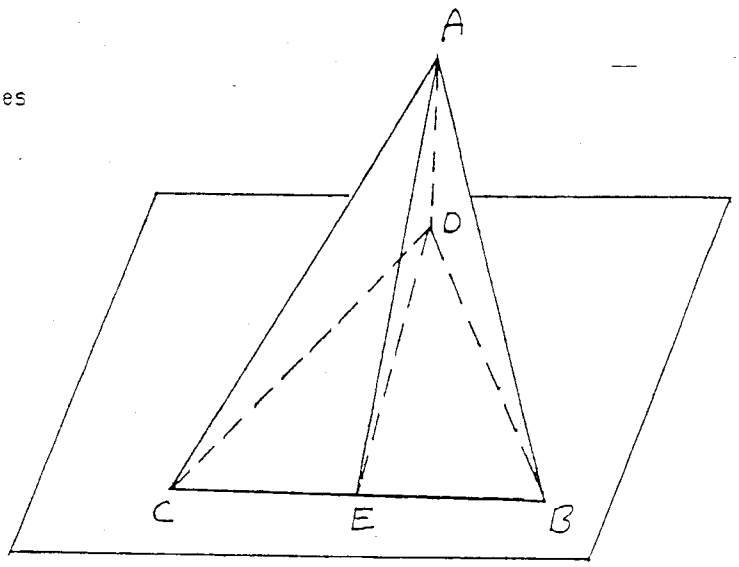
Given: AB = CD, AD = BC, $\angle 9 = \angle 11$
Prove: DE = BF



PROOF EXERCISE

Write a complete and logical proof. Justify each step with a definition, postulate or theorem.

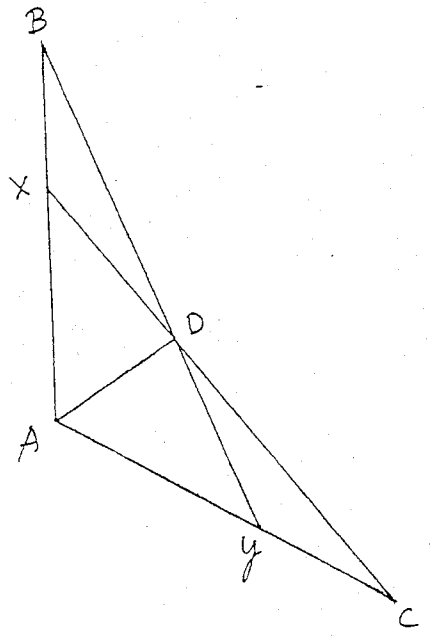
Given: AC = CD, AB = BD
Prove: Triangle AED is isosceles



PROOF EXERCISE

Write a complete and logical proof. Justify each step with a definition, postulate or theorem.

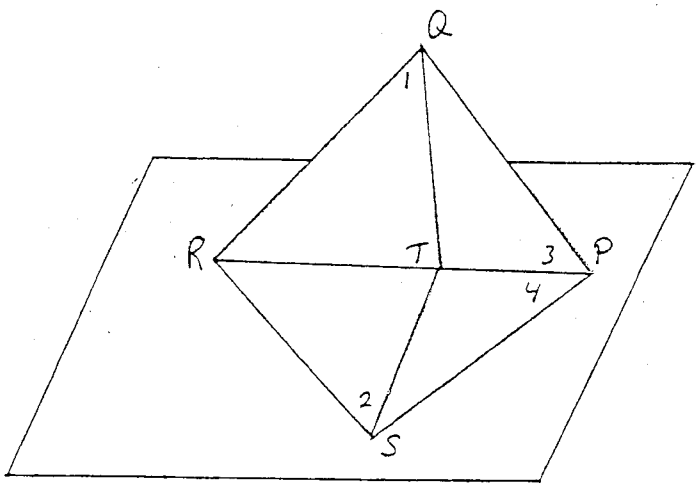
Given: $\angle DAX = \angle DAY$, $AX = AY$
Prove: $BD = CD$



PROOF EXERCISE

Write a complete and logical proof. Justify each step with a definition, postulate or theorem.

Given: $\angle 3 = \angle 4$, $PQ = PS$
Prove: $\angle 1 = \angle 2$



PROOF EXERCISE

Write a complete and logical proof: Justify each step with a definition, postulate or theorem.

Given: Z is the midpoint of PS and QR
Prove: ZX = ZY