Hannah Ruebeck

Lehigh Valley Summerbridge

Summer 2013

7th Grade Week 3 Lesson Plans

Core Team 1

**DAY 11: July 1st**

**Topic: Word Problems and Integer Operations**

* **Objectives:** 
  + Students will identify words that indicate a mathematical operation.
  + Students will write their own word problems.
  + Students will solve their peers’ word problems.
* **Materials Used**
  + Chalk and chalkboard
  + Individual whiteboards and markers
  + SMARTboard
  + Red and blue note cards
  + Take-home sheet (handout)
  + Homework (handout)
* **Methodology:**
  + Warm-Up: [10 min]
    - Each group from Friday will share their stories that they wrote about fractions in real life. After all have shared, I will show them that their stories could easily become word problems. We will turn one story into a word problem.
  + Activity 1: Review [10 min]
    - We will review the key words that indicate operations in word problems. We will make a chart with which words indicate which operations, which will appear on today’s take-home sheet. Students will volunteer examples of ways that we use these words in everyday life. We will do two examples as a class:
      * Mary has twelve cats who each eat 3 cans of food per day. How many cans of food does Mary need for one week?
      * There are 60 m&m’s in a package. John empties 7 packages into a bowl, and then eats 32 m&m’s from the bowl. How m&m’s are left in the bowl?
  + Activity 2: Word Problem Practice [20 min]
    - Students will be broken up by ability level (high, middle, and low) and put into pairs. Each pair will work together to write 2 word problems. They will each copy one problem onto one red notecard and it’s solution onto another blue notecard. Then I will pair up the pairs to make groups of 4, still separated by ability level. The groups will exchange notecards and solve each other’s problems. I will circulate around the classroom and help any students that are struggling.
    - Any groups who finish early will write more word problems on paper, and I will pick the best ones to use as our warm up tomorrow.

* + I will then explain the worksheet that they will be filling out for homework, and pass out tonight’s homework and take-home sheet. [3min]
* **Homework:** 
  + Word Problems Worksheet 2

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_

**WORD PROBLEMS WORKSHEET 2**

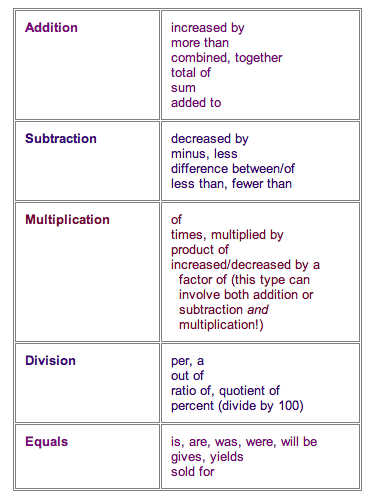
Solve the following word problems.

1. Katherine is very interested in cryogenics (the science of very low temperatures). With the help of her science teacher she is doing an experiment on the affect of low temperatures on bacteria. She cools one sample of bacteria to a temperature of -51°C and another to -76°C. What was the temperature difference in the two experiments?
2. You owe $225 on your credit card. You make a $55 payment and then purchase $87 worth of clothes. What is the integer that represents the balance owed on the credit card?
3. If it is -25F in Rantoul and it is 75F in Honolulu, what is the temperature difference between the two cities?
4. During the football game, Justin caught three passes. One was for a touchdown and went 52 yards. The other was for a first down and was for 17 yards. The other was on a screen pass that did not work so well and ended up a gain of -10 yards. What was the total yardage gained by Justin on the pass plays?
5. The mailman delivered a $22 check and 3 - $14 bills today. He also took back one $5 bill. What is the total in the mailbox?

1. A monkey sits on a limb that is 25 feet above the ground. He swings up 10 feet, climbs up 6 feet more then jumps down 13 ft. How far off the ground is the monkey now?

**INTEGER OPERATIONS AND WORD PROBLEMS TAKE-HOME SHEET**

**6/1/13**

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**7th Grade Syllabus: Week 3**

*Summer 2013 Core Team 1 Hannah Ruebeck*

|  |  |  |  |
| --- | --- | --- | --- |
| DAY | LESSON TOPIC | TAKE-HOME SHEET | TONIGHTS’ HOMEWORK |
| Monday | Word Problems with Integer Operations | Word Problem Key words | Word Problems Worksheet 2 |
| Tuesday | Order of Operations | PEMDAS, Practice Problems | Order of Operations Worksheet 1 |
| Wednesday | Order of Operations |  | Order of Operations Worksheet 2 |
| Thursday | NO SCHOOL  4TH OF JULY |  |  |
| Friday | NO CLASSES  OLYMPICS DAY |  |  |

**DAY 12: July 2nd**

**Topic: Order of Operations**

* **Objectives:** 
  + Students will identify the Order of Operations
  + Students will solve problems using the Order of Operations.
* **Materials Used**
  + Chalk and chalkboard
  + SMARTboard
  + Individual Whiteboards and markers
  + Take-home sheet (handout)
  + Homework (handout)
* **Methodology:**
  + Warm-Up: [8 min]
    - I will project the following word problem on the board. I will ask students to solve the problem at their seats. After we have gone over the answer, I will ask students how they knew what order to perform the operations in. I will suggest that we create an “order of operations” in which to do non-word problems, which we will do.
      * Anne has five bags of marbles. Each bag has 4 red marbles and 7 green marbles. She also has 20 marbles in a separate box. How many marbles does Anne have in total?
        + 5(4+7)+20
  + Activity 1: [15min]
    - I will introduce the Order of Operations and its acronym, PEMDAS. I will indicate the math sign for each operation. I will ask the students if they know what an acronym is. I will ask the students if they know what a pneumonic device is. I will introduce Please Excuse My Dear Aunt Sally as a way to remember PEMDAS.
    - At their seats, students will create their own pneumonic devices for PEMDAS. I will pass out crayons and students will write their pneumonic devices to be hung around the classroom.
  + Activity 2: [20 min]
    - I will project practice problems on the Smartboard and students will complete them on their whiteboards. The problems will be included on today’s take-home sheet.
* **Homework:** 
  + Integers Worksheet 4

**ORDER OF OPERATIONS TAKE-HOME SHEET**

**7/2/13**

The order of Operations: PEMDAS

*Parentheses Exponent Multiplication/ Addition/*

*Division Subtraction*

Pneumonic Device: Please Excuse My Dear Aunt Sally

Write your own Pneumonic Device here

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**Whiteboard Problems:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Problem** | **Simplify** | **Simplify** | **Answer** |
| 5  8 -3  2= | 40-6 = |  | 34 |
| 3 +10/2 -12= | 3 + 5 – 12 = |  | -4 |
| 20/(4+1) + (7)(2)= | 20/5 +14 = | 4+14 = | 18 |
| 11+2  -4= | 11 + -8 = |  | 3 |
| 15/-5+3 + (3)(2) -6= | -3+3+6-6 = |  | 0 |
| 12/2  (1+3)= | 64 = |  | 24 |
| 7+2  (2)(1)- 15 = | 7+22-15 = | 7+4-15 = | -4 |

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade: \_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**ORDER OF OPERATIONS WORKSHEET**

Evaluate the following expressions. Please show all work.

1. (17+3)/4
2. 2)(3)
3. )
4. 3[21+(-10)]
5. 4-12/4+(-6)
6. On the back of this sheet, explain why the Order of Operations is important. Come up with a real-world example to prove your point. Please answer in at least 6-7 sentences.

My example: The grocery store charges a $1 tax. If you are buying 3 apples at 2$ each, you multiply 3(2) before adding the $1 tax to get a total of $7. If you added 3+1=4 and multiplied that by 2, you would be paying 8$ which is too much.

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**DAY 13: July 3rd**

**Topic: Order of Operations**

* **Objectives:** 
  + Students will make a song, rap, skit, or dance about the Order of Operations.
  + Students will present their song, skit, rap, or dance to the class.
* **Materials Used**
  + Chalk and chalkboard
  + SMARTboard
  + Individual Whiteboards and markers
  + Take-home sheet (handout)
  + Homework (handout)
* **Methodology:**
  + Warm-Up: [5 min]
    - Student volunteers will share their examples of Order of Operations in real life from their homework.
  + Activity 1: [30 min]
    - Students will be separated into 3 groups by ability level – low, middle, and high. They will work to make a skit, song, dance, or rap that explains the order of operations and why they are important.
    - I will pass out the rubric for the project and explain that they will present their skit/song/rap/etc at the end of class today. We will go over the rubric.
    - Students will spend 20 minutes working on their projects.
  + Activity 2: Presentations [10 min]/ Wrap-Up
    - Each group will present their skit, song, dance, or rap. Each student will fill out the participation slip and hand it in.
  + I will pass out todays’ homework. There is no take-home sheet.
* **Homework:**
  + Order of Operations Worksheet 2

PEMDAS Group Project **Rubric**

1. You will create a song, dance, skit, or rap about the Order of Operations.
2. Each member of the group must contribute fully to the project.
3. You must represent all of the operations in the correct order.
4. Your project must include at least one example.
5. You must be ready to perform at the end of class today.

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To fill out after your performance:

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Group Name: \_\_\_\_\_\_\_\_\_\_\_\_

I think every member of my group participated fully

YES \_\_\_\_\_ NO \_\_\_\_\_\_\_\_

If no, how could your group have worked better together?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade: \_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ORDER OF OPERATIONS WORKSHEET 2**

1. =
2. =

On the back of this sheet, explain one thing you learned from a presentation today in 3-4 sentences. Identify which presentation you are talking about.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­\_

Hannah Ruebeck

Lehigh Valley Summerbridge

Summer 2013

8th Grade Week 3 Lesson Plans

Core Team 1

**DAY 11: July 1st**

**Topic: Simplifying Equations**

* **Objectives**:
  + Students will simplify algebraic expressions using the distributive property, combining like terms and the order of operations**.**
  + Students will solve algebraic equations using the distributive property, combining like terms and the order of operations**.**
* **Materials Used**
  + Chalk and chalkboard
  + Individual whiteboards and markers
  + Smartboard
  + Take-home sheet (handout)
  + Homework (handout)
* **Methodology:**
  + Warm-Up: [8 minutes]
    - We will go over all of the stations that the students did on Friday, and discuss how all of these things (temperature conversions, money exchange, travel time, and cell phone plans) are ways that the students use equations in everyday life. I will ask students to come up with more ways they use equations every day that they had previously not realized.
  + Activity 1: Combining Like Terms [10 min]
    - I will introduce “combining like terms” with several examples. I will ask the students what “terms” are. We will establish that they are constants, variables, or multiples of variables. I will explain that we can combine several terms that are “like” by carrying out the operation. Example: I will write 7x+2y on the board. I will ask the students if we can combine these two terms (NO). I will change the 2y to 2x and ask the students if we can combine or “simplify” this new expression (YES). To combine two or more terms, they must be of the same variable or be constant. This part of the activity will take 5 minutes.
    - I will project a smattering of algebraic terms on the Smartboard and each student will pair up the terms. After 2 minutes I will add operations to the pairs and the students will combine the terms. This part of the activity will take 5 minutes in total.
  + Activity 2: The Distributive Property [10 minutes]
    - I will put the problem “3(2x+1) on the board. I will ask students what the first step in simplifying this expression would be. We will determine that we need to multiply the 3 times both terms inside the parentheses. The simplified expression is 6x+3. I will explain that this is called the distributive property because we are distributing the 3 with both terms in the parentheses. We will do more examples as a class. I will explain that we use the distributive property in equations as well as expressions.
  + Activity 3: Order of Operations [10 min]
    - I will ask a student to name the Order of Operations. I will explain that we use the order of operations in variable expressions and equations just as we do in integer expressions. I will project practice problems and students will simplify expressions and solve equations using all three methods that we learned today. The problems will appear on today’s take-home sheet.
  + I will then distribute and explain the homework sheet and today’s take-home sheet. . [2min]
* **Homework:** 
  + Equations Worksheet 3

**8th Grade Syllabus: Week 2**

*Summer 2013 Core Team 1 Hannah Ruebeck*

|  |  |  |  |
| --- | --- | --- | --- |
| DAY | LESSON TOPIC | TAKE-HOME SHEET | TONIGHTS’ HOMEWORK |
| Monday | Simplifying expressions and equations | Whiteboard problems | Equations Worksheet 3 |
| Tuesday | Word problems and algebraic equations |  | Equations Worksheet 4 |
| Wednesday | Equations Review with all Core Teams |  | Equations Worksheet 5 |
| Thursday | JULY FOURTH NO SCHOOL |  |  |
| Friday | OLYMPICS DAY NO CLASSES |  |  |

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade: \_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**EQUATIONS WORKSHEET 3**

Simplify the following expressions:

1. 4(6x+3)+2x \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. 3y + 2y(4) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. 11z -6(8z) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. (7u+3u) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Solve the following equations:

1. 3(1+2x) + 4x = 23 x =
2. 6y +4(y+5) = 70 y =
3. -8(4-z) – 3 = 21 z =
4. 6+7w – 8 = 12 w =
5. u =
6. If x= 3 and y= 5, simplify the following:

4x+8(2+2y)= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 7y(12-x)= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**SIMPLIFYING EXPRESSIONS AND EQUATIONS TAKE-HOME SHEET**

**7/1/13**

|  |  |  |  |
| --- | --- | --- | --- |
| **Problem** | **Simplify** | **Simplify** | **Answer** |
| 2(5x+3)+x | 10x+6+x | 11x+6 ✔ |  |
| (11-x)(-3)+4x-4 | -33+3x+4x-4 | -37+7x ✔ |  |
| 6x+8x-12(x+4) | 14x-12x-48 | 2x-48 ✔ |  |
| 11(3+4x)-5(2x+1) | 33+44x-10x-5 | 34x+28 ✔ |  |
| 2x+2(9x+6)=212 | 2x+18x+12=212 | 20x+12=212 | x=10 ✔ |
| -10x/2 + 6(2x+7)=91 | -5x+12x+42=91 | 7x+42=91 | x =7 ✔ |
| 3(5x+7)-5(6x-2)=121 | 15x+21 – 30x +10= 121 | -15x+31= 136 | x = 8 ✔ |
| 10(x+1)= 3(2x+4) | 10x+10 = 6x +12 | 4x = 2 | x = ½ ✔ |
| 2(x+5)=6(x-2) | 2x+10=6x-2 | 12=4x | x =3 ✔ |

**DAY 12: July 2nd**

**Topic: More Algebraic Expressions and Equations**

* **Objectives**:
  + Students will identify the strategy for solving word problems.
  + Students will solve word problems using algebraic equations.
* **Materials Used**
  + Chalk and chalkboard
  + Individual whiteboards and markers
  + Smartboard
  + Red and blue notecards
  + Take-home sheet (handout)
  + Homework (handout)
* **Methodology:**
  + Warm-Up: [5 min]
    - I will ask each student to write down his or her own method to solving word problems. 2 volunteers will then share their methods with the class. I will project the following word problem explanation and we will identify new key words that indicate that a word problem requires algebraic equations.
      * [**http://www.wisc-online.com/Objects/ViewObject.aspx?ID=TMH5206**](http://www.wisc-online.com/Objects/ViewObject.aspx?ID=TMH5206)
  + Activity 1: [15 min]
    - I will project several word problems to the class that can be solved using algebraic equations. Students will solve the problems on their whiteboards. The problems will appear on tonight’s take-home sheet.
  + Activity 2: [20 min]
    - I will pair students up by ability level (low, medium, high). Each pair will write 3 word problems that require algebraic equations to solve them. They will write the problem on red notecards and the solution on blue notecards. Then they will exchange with another group and work to solve each others’ word problems. [If the class is only 2-3 people, I will have the students write 5-6 word problems as a group and then we will solve them together as a class].
  + I will pass out tonight’s homework [2 minutes]
* **Homework:** 
  + Equations Worksheet 4

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade: \_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**EQUATIONS WORKSHEET 4 – Word Problems**

1. Sarah is 5 years older than Bill. Sarah and Bill together are 17 years old. How old is Sarah? How old is Bill?
2. I bought ***x*** apples at the store today. Apples are each 2 dollars and there was a 6-dollar tax on my entire purchase. If I spent 36 dollars, how many apples did I buy?
3. I have 16 more pens than pencils. I have 3 more pens than markers. If I have 40 writing implements in total, how many pens do I have? How many pencils? How many markers?
4. I owe 5 friends each 7 dollars and I owe my 2 brothers each ***x*** dollars. If I borrowed a total of 100 dollars, how much do I owe each brother?
5. Lily has 7 more bags of M&M’s than John does. John has 2 more bags of M&M’s than Chris does. Each bag of M&M’s contains 60 M&M’s. If Lily, John, and Chris all pour all of their bags into one bowl, how many M&M’s will be in the bowl?
6. I had 5 packages of blue notecards that each held ***x*** notecards and 3 packages of red notecards that each held 50 more notecards than the blue packages. If I have 950 notecards, how many red notecards do I have? How many blue?

**DAY 13: July 3rd**

**Topic: Scavenger Hunt - Equations**

All four core-teams will come together to do an equation-themed scavenger hunt. The lesson plan will be attached to Courtney’s lesson plans for the week.