Week 13 Pre-Algebra Assignment:

Day 1: pp. 239-240 #2-30 even
Day 2: pp. 242-243 #2-28 even
Day 3: pp. 246-247 #2-38 even
Day 4: pp. 252-253 #8, 10, 12, 13, 19
Day 5: p. 240 #40-49, p. 244 # 40-45, p. 254 #25-34

Notes on Assignment:

Page 239-240: (#2-30 even)

Work to show:

All problems: Write the expression, substitute the values, and show work for calculations.

#6: Remember that you need a common denominator. Decide on your denominator, then multiply each fraction by 1 in the form of $\frac{\#}{\#}$ in order to get that denominator.

#8: When you multiply and one of the numbers does not have a denominator, put a 1 under it. You can either multiply and then simplify your answer, or you can cross cancel.

#10: Be careful with this one because your first product with be negative so you will be adding a negative to a positive.

#12: Remember that when you multiply decimal numbers you do not need to line up the decimal points.

#16-18: The division bar acts like a grouping symbol, so calculate the value of the numerator and denominator separately first, and then simplify the resulting fraction if possible.

#22: The order of operations says to do the exponents before you do the addition.

#26: Remember to do the exponent before the multiplication.

#30: This problem is going to result in a complex fraction. Remember that to simplify a complex fraction, rewrite the problem using ÷ instead of the big division bar. For example,

$$\frac{\frac{4}{5}}{\frac{3}{7}} = \frac{4}{5} \div \frac{3}{7} = \frac{4}{5} \cdot \frac{7}{3} = \frac{28}{15}$$

Pages 242-243: (#2-28 even)

Work to show:

All problems: Show the calculations needed to combine the like terms, including any canceling and getting common denominators. Consider writing all subtraction as addition!

#2: For this problem, think 2 apples + 4/5 of an apple – 3 apples. In order to find out how many apples you have, you need to take 2 + 4/5 – 3. After you take 2 – 3 you will have -1 + 4/5. Remember to get a common denominator. Since you already have fifths, write the -1 as -5/5.

#4: Combine the 2nd and 3rd terms first (and simplify the answer). Then combine that with the first term. Write the 8 over 1 and find a common denominator.

#10: The last term does not have a coefficient, so remember to put a 1 there. Better yet, since the other 2 terms are fractions, put $\frac{1}{1}$ instead.

#12: Remember to line up the decimal points.

#14: You need to clear the ( ) by multiplying both terms inside by $\frac{-2}{9}$. But before you do that, write the subtraction as addition. That means write $\left(y-\frac{3}{5}\right)$ as $\left(y+\frac{-3}{5}\right)$.

#16: You must combine the x^2 terms and the number terms separately.

#18: Your answer will have a *w*-term, a *y*-term, and a number term.

#22: Combine the x-terms together and then the x^2 terms separately.

#26-28: These problems are tough! Carefully clear the ( ) first and then combine any like terms. Write all subtraction as + - so that you don't get confused with the negatives.

Pages 246-247: (#2-38 even)

Work to show:

#All Problems: Most of these are 2-step problems. Write the problem down, leaving room so that you can write in what you need to do to both sides. Show calculations.

#2-8: These problems all need to be "undone" by adding or subtracting.

#10: Since dividing both sides by 3 would give you a complex fraction on the right, instead, write a 1 under the 3 and multiply both sides by the reciprocal of 3/1, which is 1/3,

#12: Do this one like you did #10.

#14-20: Remember to line up decimal points when you add or subtract.

#24: Before you can solve this problem, you must first write $1\frac{3}{4}$ as an improper fraction. Then multiply by its reciprocal on both sides to solve.

#26: Do this one like you did #24.

#30: Do the division, remembering that your answer will be negative.

#32: Notice that the variable is on the right. To solve, you need to divide both sides by 0.003.

#38: You can either write both fractions as improper or leave them as mixed numbers. It's ok to add and subtract mixed numbers, but it's NOT ok to try to multiply them.

Pages 252-253: (#8, 10, 12, 13, 19)

Work to show:

All problems: These a 5-step word problems. Number each step and show all calculations.

#8: Let x = the number of hours the team spends practicing. That means for the equation that three-eighths of x must equal 45 minutes. Since x represents hours, you must change the 45 minutes into hours. 45 minutes is ¾ of an hour, so for your equation, you need that three-eighths of x to equal ¾ .

#10: Think of it this way: Each child will receive one-fourth of the total amount of his savings. Or you could think of it like this: If you take what each child receives and multiply that number times 4, you'd better get $501,052.40.

#12: When it says that 3% of the students come from a certain state, and that this number is 156, we need to take .03 times all students and that should equal 156. So let x = the number of all students.

#13: Remember that when you have 2 things you are trying to find, let x = the one you know the least about. In this case you don't know anything about how long he worked on Monday, so let x = # hours worked on Monday. If that's the case, then how would you write how long he worked on Tuesday if it was "$1\frac{3}{4}$ hours longer then on Monday." For the equation, add the number of hours worked on Monday and Tuesday to get $13\frac{1}{4}$ hours.

#19: This problem has 2 numbers, just like #13 did. Which of the two do you know the least about, the larger or the smaller number? That's what you let x equal. Then represent the other number using x. The equation comes from the first sentence.

Page 240: (#40-49)

Work to show:

#40-44: Answers only

#45-49: Write the fraction and show what you are dividing by to simplify it.

Page 244: (#40-45)

Work to show:

All problems: Show the steps to solve the equations.

#40: Clear the ( ) first.

#41: You must multiply both sides by 7 first to take care of the grouping symbol. The you can subtract 6.

#42-43, 45: Take care of the grouping symbol division bar first, just like in problem #41.

Page 254: (#25-34)

Work to show:

#25-29: Show factor trees for both numbers

#30-34: Write the problem and show the loops for the cross products and then solve.

#25-29: Remember your divisibility rules. If it's even, 2 goes into it. If the digits add to a number divisible by 3, then your number is divisible by 3. If the digits add to a number divisible by 9, then your number is divisible by 9. You will use all of these and a couple more rules.

#33-34: Write these in fraction form and then solve using cross products.