

Week 12 Pre-Algebra Assignment:

Day 1: pp. 224-225 #1-31 odd, 38 (5 steps)

Day 2: pp. 229-230 #2-38 even

Day 3: pp. 235-236 #2-38 even

Day 4: pp. 224-225 #33-35, 41-45, 46-50 (5 steps)

Day 5: p. 230 #39-42, p. 236 #41, 44-53

Notes on Assignment:

Page 224-225: (#1-31 odd, 38)

Work to show:

#All Problems: Write down the problem and show all work.

General Notes for Adding and Subtracting Fractions:

- If the denominators are the same, add or subtract the numerators and put the answer over the common denominator. (See example 1 on page 220.)
- If the denominators are not the same, find the LCM, and multiply each fraction by 1 in the form of $\frac{\#}{\#}$ in order to get the LCM in the denominator of each fraction. Then add or subtract the numerators and put the answer over the common denominator. (See examples 2-6 on pages 221-223.)
- For mixed numbers, do the operations separately, starting with the fractions and then the whole numbers. If adding the fractions gives you an improper fraction, change it to a mixed number and combine it with the sum of your whole numbers. (See example 7 on page 223.)
- If you have to borrow from the whole number for subtraction, make sure to borrow 1 in the form of $\frac{\#}{\#}$ where the # is the LCM. (See example 8 on page 223.)

General Notes for Adding and Subtracting Decimals:

- Line up the decimals points in all numbers. Put in zeros as place holders if needed. (See example 9 on page 223.)

#9: You need a common denominator. The LCM is 24 so multiply the first fraction by $\frac{3}{3}$ and the second by $\frac{4}{4}$.

#11: Be careful here. When you get a common denominator you will see that the first number is smaller than the second number so your answer will be negative. I suggest you write all subtraction as + - first.

#15: You will need to borrow 1 from the 7 in order to subtract. Since your other number is in thirds, the 1 that you borrowed should be written as $\frac{3}{3}$. That means that 7 should be written as $6\frac{3}{3}$.

#21: You have a positive and a negative number, so you will need to subtract $80.2 - 4.22$ first and then since 80.2 is larger and it is positive, your answer will be positive.

#29: I suggest you do this in two parts. First, subtract the first two mixed numbers. Then take your answer and subtract the third mixed number.

#31: Do what is in () first and then take that answer and add it to the first mixed number.

#38: This is a 5 step word problem. You don't know anything about the speed of the duck, so let x = the speed of the duck. When you see something like $\frac{7}{12}$ the speed of the duck, that means $\frac{7}{12}$ times the speed of the duck. So the speed of the sparrow = $\frac{7}{12}x$. Do the same for the crow and then translate the 2nd sentence into your equation.

Pages 229-230: (#2-38 even)

Work to show:

#2-12: Write the problem down with all fractions in improper form. Show canceling and the final answer.

#14-24: Write the problem down and show the multiplication.

#16-30: Write the problem down with all fractions in improper form. Show canceling and the final answer.

#30-38: Write the problem down and show the multiplication.

General Notes for Multiplying Fractions:

1. Write any mixed number as an improper fraction.
2. Cancel any factor in a numerator with any factor in a denominator.
3. When no more canceling can be done, multiply the numerators together and the denominators together.
4. Check to make sure you have the correct sign on your answer.

#4: The 4 and 12 have a factor of 4 in common. Take 4 into both numbers.

#6: If a number does not have a denominator, put a 1 as the denominator.

#8: The mixed number needs to be written as $\frac{7}{4}$ and the -4 needs to be written as $\frac{-4}{1}$.

#10: Write each mixed number as an improper fraction first.

#26: Remember that you can cancel any factor on the top with any factor of the bottom.

General Notes for Multiplying Decimals:

1. Write the longer decimal number on top (optional).
2. Multiply, ignoring the decimal points.
3. Add up the number of decimal places in both numbers
4. The number of places in your answer will be the same as that number.

#34: Remember to do what is in () first.

Pages 235-236: (#2-38 even)

Work to show:

- #2-12: Write the problem down with all fractions in improper form and then rewrite as multiplication. Finish the problem.
- #14-24: Show the long division problem and work.
- #26-32: Show the work as listed above for what is in (). Then write a new problem with that answer and the rest of the problem. Show work.
- #34-38: Show the long division problem and work.

General Notes for Dividing Fractions:

1. Write each mixed number as an improper fraction.
2. Change each division problem to multiplication by flipping the 2nd number.
3. Cancel any factor in a numerator with any factor in a denominator.
4. When no more canceling can be done, multiply the numerators together and the denominators together.
5. Check to make sure you have the correct sign on your answer.

#8: Remember to write the mixed numbers as improper fractions **before** you turn it into multiplication.

General Notes for Dividing Decimals:

1. If the divisor is a decimal number, move the decimal point all the way to the right. Move the decimal point the same number of places to the right in the dividend (number under the division symbol). Move the decimal point straight up into the answer.
2. Do the long division, ignoring the decimal point, as it's already been placed.

#14: Move the decimal point straight up from the 14.31 to place it in the answer.

- #18: Move the decimal point to the right in the 0.06 to make it 6. Move the decimal point the same number of places in 76.2 to make it 7620. You have to put a 0 after the 2 in order to hold the place. Do the division and move the decimal point straight up from the 7620.
- #22: Ignore the negative problem while you do the problem, but remember to make the answer negative because you are dividing a negative by a positive.
- #26: Change the division in the () to $\frac{3}{5} \cdot \frac{5}{4}$ and then cancel the 5's to get $\frac{3}{4}$. Then calculate $\frac{3}{4} \div \frac{1}{5}$.
- #28: Remember to write the 10 as $\frac{3}{1}$ before you change it to multiplication.
- #34-38: If you are to round these answers to the nearest hundredth, you need to have an answer divided out to thousandths. Then look at the number in the hundredths place and then to the right.

Pages 224-225: (#33-35, 41-45, 46-50 (5 steps))

Work to show:

- #33-35: These are not to be done as 5-step problems. Write the expression and do the calculation.
- #41-45: Write the rounded numbers and then the answer.
- #46-50: 5 step work problems. Number your steps.

- #41-45: To round a fraction, compare the numerator and denominator. If the numerator is over half the size of the denominator, round the whole number up. If not, round it down.
- #46: You let $x =$ the cost for each muffin. Remember that the total cost for muffins is x times the number of muffins (7). If you add what is spent on muffins to what is spend on milk (2 times 3.15) you get the total bill of \$12.53.
- #49: Since it says “no more than \$175” that means \leq \$175. That means the total cost for cleats, shin guards, and socks must be \leq \$175. The cost of socks is x time \$2.42.
- #50: Take the number of hours babysitting (15) times \$13 and the number of hours for other work (x) times \$7 to get the total of \$272.

Page 230: (#39-42)

Work to show:

- All problems: Show work as needed.

#39: Follow the order of operations, which means to take care of the exponents first, and then multiply the fractions together.

#40: Add the fractions in () and then square it. Lastly, multiply by $\frac{8}{15}$.

#41-42: Do what is in () first.

Page 236: (#41, 44-53)

Work to show:

#41: Do not do this as a 5-step problem. Show work.

#44-48: Show work.

#49-53: Write the problem, do the cross multiplication, and write the answer.

#41: Figure out the hourly pay for time and a half and for double pay, based on the regular hourly pay of \$14.50. Then calculate the pay for both weeks in question.

#44-48: Remember that the place values for base 5 are 625, 125, 25, 5, and 1.

#49: Draw your loops for cross multiplication and then multiply -1 times 25 and 9 times -6. Write the product at the top of each loop. The larger product denotes the larger fraction.