

## Week 10 Pre-Algebra Assignment:

Day 1: pp. 184-185 #1-34

Day 2: pp. 190-191 #1-6, 7-29 odd

Day 3: p. 197 #1-25 odd, 33-35

Day 4: p. 185 #46-55, p. 191 #38-47, p. 198 #42-46

Day 5: Worksheet

### Notes on Assignment:

Page 184-185: (#1-34)

#### Work to show:

#1-6: Write the fraction, then what is being divided, followed by your answer.

#7-12: Write the fraction, then the prime factorization, then show the canceling and the answer.

#13-21: Write the fraction, then the improper fraction. Show any division needed to get the fraction in simplest form.

#22-30: Show any division work needed in the calculation.

#31-34: Write the expression, substitute in the values, and simplify to a single number or fraction.

#1-6: Do these as follows:  $\frac{30 \div 6}{42 \div 6} = \frac{5}{7}$ . Always ask yourself "What's the largest number that will go into both the numerator and denominator?" That's the GCF. If it happens that you use a number smaller than the GCF, you may have to repeat the process. Keep going until the fraction cannot be simplified any more.

#7-12: Do these as follows:  $\frac{36}{84} = \frac{\cancel{2} \cdot \cancel{2} \cdot \cancel{3} \cdot 3}{\cancel{2} \cdot \cancel{2} \cdot \cancel{3} \cdot 7} = \frac{3}{7}$ .

#13-21: When writing a fraction like  $2\frac{3}{4}$  you multiply the whole number times the denominator and then add the numerator. This number is your new numerator. In this case we have  $2 \cdot 4 = 8$ , and then we add 3 to that to get 11. So our answer is  $\frac{11}{4}$ .

#22-30: Divide the denominator into the numerator to get the whole number. Then take the remainder and put it over the denominator. For example, for  $\frac{45}{12}$  you first divide 45 by 12 and get 3 with a remainder of 9. So, the new fraction is  $3\frac{9}{12}$ . This still needs to be simplified, so ask yourself what the GCF of 9 and 12 is and then divide like this:  $3\frac{9 \div 3}{12 \div 3} = 3\frac{3}{4}$ .

#31-34: Remember to follow the order of operations with these problems.

Pages 190-191: (#1-6, 7-29 odd)

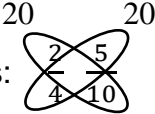
**Work to show:**

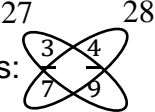
#1-6: Graph all on a single number line.

#7: Answer only

#9-23: Show the loops and the products.

#25-29: Show the fractions with common denominators and then compare numerators.

#7-13: Do these as follows:  so these are equal.

#9-23: Do these as follows:  Since  $27 < 28$ , then  $\frac{3}{7} < \frac{4}{9}$ . Make sure to multiply from bottom to top and put the numbers on top.

#25-29: Multiply each fraction by 1 in the form of  $\frac{\#}{\#}$  in order to get the same denominator for both. For example, for  $\frac{5}{8}$   $\frac{3}{4}$  take  $\frac{3 \cdot 2}{4 \cdot 2} = \frac{6}{8}$ . Then compare the numerators to get  $\frac{5}{8} < \frac{6}{8}$ .

Page 197: (#1-25 odd, 33-35)

**Work to show:**

#1-9: Show the long division.

#11-17: Write the fraction as a decimal and then show simplifying.

#17-25: Show the long division.

#33-35: Show the work.

#1-9: Divide the numerator by the denominator.

#11-17: Write the numerator over the correct power of 10 and then simplify.

#13: After you write  $\frac{375}{1000}$  divide the top and bottom by 25.

#15: Keep dividing both the numerator and denominator by 5.

#19-25: Divide the numerator by the denominator.

#33-35: Solve these like the following:  $0.363636\dots$

$$\begin{aligned}x &= .363636 \dots \\100x &= 36.363636 \dots\end{aligned}$$

(We multiplied by 100 because there were 2 digits repeating. 100 has 2 zeros.)

Now rewrite and subtract:

$$\begin{array}{r}100x = 36.363636 \dots \\x = .363636 \dots \\ \hline 99x = 36 \\ \quad \underline{36} \\ \quad \quad 99\end{array}$$

Simplify:  $\frac{36 \div 9}{99 \div 9} = \frac{4}{11}$

Page 185: (#46-55)

**Work to show:**

#46-50: Write the equation and show the steps needed to solve it.

#51-55: Show factor trees.

#46: Write the quotient, then decrease it by 18.

#49: This can be a little confusing if you don't pay attention to the commas. The difference is written first, then the fraction bar under the whole difference, because the whole difference is divided by -8.

#51-55: Refer to your divisibility rules.

Page 191: (#38-47)

**Work to show:**

#38-42: Write the problem, then show what is being done to both sides to solve.

#43-45: Use the prime factorization trees if needed to find the GCF.

#46-47: Answers only

#38: Remember that when you divide both sides by a negative number, you flip the inequality.

Page 198: (#42-50)

**Work to show:**

#42-46: Show work in solving equations.

#47-50: OMIT THESE PROBLEMS.

#42: Change the minus a minus into + and then combine the x terms before solving.

#43-44: Combine the like terms before solving.

#45: Clear the ( ) by multiplying through by 8. Then combine all like terms before continuing.

#46: Combine the like terms before solving.

Worksheet:

**Work to show:**

All problems: Show any work needed.

#1: Use the functions that are defined to find your answers. Like for a)  $3\Delta 5 = 5 + 3 \cdot 5$  .  
Follow the order of operations to finish the calculation.

#2: Rewrite the equation based on the rule and then solve. Like for a)

$$\begin{aligned}m\Delta 6 &= 6 + m \cdot 6 = 72 \\6 + 6m &= 72 \\6 + 6m - 6 &= 72 - 6 \\6m &= 66 \\\frac{6m}{6} &= \frac{66}{6} \\m &= 11\end{aligned}$$