

Week 3 Algebra 2 Assignment:

Day 1: pp. 44-45 #2-20 even, 21-37 odd

Day 2: pp. 48-49 #2-20 even, 25-29

Day 3: pp. 52-53 #1-15 odd, 19

Day 4: p. 56 #2-20

Notes on Assignment:

Page 44-45:

Work to show:

#2-10: Answers only is fine

#12-20: As you write the problem down, do any calculations like combining like terms or clearing (). Leave some space so you can write down what you are doing to both sides of the equation. Even if you know the answer in your head and are tempted to just write the answer, don't! The *process* is just as important as the answer. Show the process!

#21-37: Follow the same instructions as above with one exception: If you plan to clear the fractions and decimals *before* multiplying out the parentheses, write down the original problem and show what you are multiplying each side by. Continue to solve the problems, showing the operations that you are doing to both sides of the equation.

#2-10: Look at the properties box on page 42. Then on these problems, ask what property is used to get you from the first step to the 2nd.

#2: What property says you can multiply both sides by a number?

#4: What property says that a number equals itself?

#6: You can see that you subtracted 2 from both sides, but there is no property for subtracting a number from both sides. What property must it be then?

#8: What did you do to both sides to get from the first line to the 2nd? Name the property. And the what did you have to do to get $x = 2$? (Hint: What is the same as dividing by 5?)

#12-20: Follow these steps for solving linear equations:

1. Clear any grouping symbols
2. Isolate the variable terms on one side (by adding and subtracting terms and/or variables from both sides)
3. Multiply or divide to solve.

#21: Clear the parentheses first. Then since the most decimal places any number has is the tenths (1 place), multiply every term by 10 to clear the decimals. [Note: You can clear the decimals before clearing the parentheses if you are comfortable with the process, but clearing the parentheses first usually produces less errors.]

#22: Clear the parentheses carefully. Multiply the first binomial by $\frac{1}{2}$. Also, make sure that the negative goes all of the way through the binomial ($3x - 9$). Then multiply all the way through by 2 to clear the fractions. [Note: You can clear the fractions before clearing the parentheses if you are comfortable with the process, but clearing the parentheses first usually produces less errors.]

Pages 48-49:

Work to show:

#2-10: Solve these, showing what you are doing to both sides. Then draw a number line for each and graph your answer. Include a couple of numbers on each side of the pertinent point on your graph.

#10-20: Clear any parentheses as you write the problem down. Continue to solve the equation, showing what you are doing to both sides of the inequality.

#25-29: Show any calculations needed.

#2-20: The same rules, hints, and notes apply to solving inequalities as they do to equations, except for the last step:

1. Clear any grouping symbols
2. Isolate the variable terms on one side (by adding and subtracting terms and/or variables from both sides)
3. Multiply or divide to solve. **If you multiply or divide by a *negative* number, you must reverse the inequality.**

#25: The exponent is only on the x, not the 3. Also, to change an exponent to a positive number, “kick” the x “downstairs.”

#26, 29: I suggest taking care of the negative exponents first.

#27: The -4 exponent must go on each factor in the parentheses. Do that first, and then use the rule for raising an exponent to an exponent to finish the problem. If you end up with a negative exponent in your answer, kick it upstairs or downstairs to change the sign on the exponent.

28: Anything raised to the zero power is 1.

Pages 52-53:

Work to show:

#1-3: Answers only is fine

#5-15: Isolate the absolute value expression if needed. Then write down your two equations connected with “or” and solve each equation.

#19: Answer only

#3: You can use the number 0 in your equation if you want.

#5-9: If the absolute value of some “stuff” equals 8 (for example), then the “stuff” = 8 or the “stuff” = -8. Write down both equation and solve. Make sure you put the word “or” in between the equations.

#11: Simplify what is inside the absolute value brackets first. Then write your 2 equations.

#13: Isolate the absolute value brackets first. Then write your 2 equations.

#15: This is tricky. Here’s a hint: Put () around the $2y + 7$ and treat it as a single quantity.

#19: Remember that we find distance between 2 numbers by subtracting them and putting the result in absolute value brackets.

Page 56:

Work to show:

#2-6: Show the calculation using the formula.

#8-10: The write down your two equations connected with “or” and solve each equation.

#12-14: Answer only

#16-18: Write down the translation and then solve.

#20: Answer only

#2-6: Think of the midpoint as the *average* of the 2 points.

#12-20: Remember that we find distance between 2 numbers by subtracting them and putting the result in absolute value brackets. If the sentence is not worded like #12, you may want to rewrite it first so that it is in the same form. This will make the translation easier.

#20: Hint: Think of this as $|x - (-4)| = 1$