

Week 10 Algebra 1 Assignment:

Day 1: pp. 187-188 #2-22 even
Day 2: p. 191 #1-23 odd, 26-30
Day 3: p. 193 #2-24 even, 26-30
Day 4: pp. 196-197 #1-13 odd, 15-20, 23-27
Day 5: p. 199 #1-17 odd, 21-25

Notes on Assignment:

Pages 187-188:

Work to show:

#2-14: Write the inequality down, leaving space. Show what was added or subtracted to both sides to solve. Graph #2 and #4.
#16-22: Combine any like terms as you write down the problem. Also, leave space as you write it down so you can show what was added or subtracted from both sides.

Notes for this section: Solve these inequalities as you would regular equations. This section focuses on adding and subtracting on both sides. Write down the inequality, leaving room to add or subtract as needed on both sides.

For graphing: Remember that the circle is open for $<$ and $>$ and it is closed for \geq and \leq . If you are not sure which way to shade, put in a number and see if it is true. For example, for $x > 4$, put an open circle on the 4. Put a number in for x . Let's say we'll put 7 in for x . Is $7 > 4$? Yes, so your shading should include the 7. This means your shaded arrow will go to the right of 4.

#4: The \neq symbol does not affect how the problem is done. Solve this problem as you would if the symbol was $=$.

#16-22: Whenever you can, combine like terms on the same side of the equals sign. So, clear your () first and then combine like terms. Continue solving.

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Work to show:

#1-11: Write the problem down and then multiply or divide on both sides to solve, flipping the inequality when necessary.
#13-23: Combine like terms as you write down the problem. Then multiply or divide on both sides to solve, flipping the inequality when necessary.
#26-30: Clear () and then simplify.

Notes for this section: This section focuses on multiplying and dividing on both sides to solve the inequalities. Remember that when you multiply or divide both sides by a negative number, you must reverse the inequality. Write down the equation, show the multiplication or division on both sides, and if necessary, reverse the inequality.

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Work to show:

#2-24: Show work solving these inequalities based on the notes below.

#26-30: Answers only

Notes for this section: This section focuses puts it all together for solving inequalities. Follow these steps:

1. Clear the ().
2. Get the variable terms on the same side.
3. Isolate the variable term.
4. Multiply or divide to solve. If multiplying or dividing both sides by a negative number, reverse the inequality.

Pages 196-197:

Work to show:

#1-13: Number line graphs for each problem. Write the answer based on what is shading on the number line.

#15-20: Show the work needed to solve each inequality and also the graph on the number line. Write the answer based on what is shading on the number line.

Notes for this section: These are all conjunctions, with the connective word “and.” That means we want the intersection of the 2 inequalities. Where do they overlap?

For these problems:

1. Write down the problem.
2. Solve each inequality separately.
3. Graph each inequality above a number line.
4. Put the overlapped portion on the number line as your final answer.
5. Write the inequality represented by your final answer.

Note: If your picture turns out to be a segment, such as between 2 and 7 with open circles on each, you can write the answer as the double inequality $2 < x < 7$. Just make sure that both inequalities are facing the same direction and that the inequality is true if you cover up the middle.

#23: Cancel before you multiply. Any factor on top can cancel with any factor on the bottom.

#24: Change to multiplication and then cancel before actually multiplying.

#25: You must get a common denominator to add fractions.

#27: There is more than one way to do this. I suggest taking care of the -3 exponent first by kicking the whole () downstairs. That makes the exponent a +3.

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Work to show:

#1-7: Number line graphs for each problem. Write the answer based on what is shading on the number line.

#9-17: Show the work needed to solve each inequality and also the graph on the number line. Write the answer based on what is shading on the number line.

#21-22: Number line for each problem

#23-25: Write each as 2 equations and solve.

Notes for this section: These are all disjunctions, with the connective word “or.” That means we want the union of the 2 inequalities. For these problems:

1. Write down the problem.
2. Solve each inequality separately.
3. Graph each inequality above a number line.
4. Put both inequalities on the number line as your final answer. If an open circle gets filled in by the other inequality, erase the circle.
5. Write the inequality represented by your final answer.

#22-25: For absolute value equations, you must write two equations. The absolute value of the “stuff” equals a positive number, so the “stuff” equals the positive number or the “stuff” equals the negative of the number. Note: Absolute value can never equal a negative number.