


Solving Inequalities Class Work

 **Objective:** Today you will be able to solve inequalities, as well as graph and check your solutions.

*What are some ways in which solving inequalities differs from solving equations?!?

 **Example:** Solve the inequality. Check and graph your solution.

$$2 - 3z < 7(8 - 2z) + 12 \leq 110$$

 **Now You Try Some!**

Solve and graph your solution to each inequality. Also write your solution as a compound inequality where applicable.

1. $4(m - 3) + 14 < 42$

2. $8k > -32$ or $-6k + 1 \leq 49$

3. $2 + 3x < 4x + 3 \leq 3x + 5$

4. $-18 > 4x - 3 \geq -15$

5. $16x \leq 32$ or $-5x < -40$

6. $13 \geq -6p - 7p$

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7. $-7(5g - 2) + 2 > -5g - 7(g + 1)$

8. $6 + w < -2(w + 5) < 22$

9. $-4f - 1.5 < -2(5 + 2f)$ or $3.5f + 6 \geq -8$

10. $4x > 2(2x - 1)$

11. Within your budget, you plan to spend less than \$110 total, but more than \$10 on entertainment per week. You plan on spending twice as much on food as you do on entertainment. You also plan on spending \$10 less on “other expenses” than on entertainment. Determine the range of money you plan on spending on entertainment per week assuming these are your only three expenses. Express your answer as a compound inequality, and explain the compound inequality via a short sentence.

***If you were to write a short note to someone who missed today’s lesson, what would you be sure to include?**

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