Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

UNIT 7 LESSON 14

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| AIM: | SWBAT solve one-step inequalities  |

**THINK ABOUT IT!**

What is or what are the value(s) of y in the equation and inequalities below? Explain.

1. y + 6 = 10
2. y + 6 > 10
3. y + 6 ≥ 10

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**Test the Conjecture**

*Test the Conjecture #1)* What is the solution of the inequality below? Graph the solution.

d – 6 > 9

*Test the Conjecture #2)* What value of h makes the inequality below true? Graph the solution.

12 ≥4h

Conjecture

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**PARTNER PRACTICE**

* CFS for top quality work
	+ Problem is annotated with margin notes to provide additional meaning
	+ Bar model is drawn accurately and labeled
	+ All calculations are shown, neatly organized, and labeled
	+ Solution is graphed
	+ Answer statement is provided
	+ Check is completed

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| *Bachelor Level* |

**Directions: For each inequality, draw a bar model to solve, graph the solution, and check using at least two values.**

1. n + 2 > 9

1. 4n ≤ 20
2. $12 \leq \frac{n}{3}$

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| *Master Level* |

1. Bianca solved the inequality 5p < 24. She said that p = 4.8. Do you agree or disagree with her claim? Explain.

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**INDEPENDENT PRACTICE**

* CFS for top quality work
	+ Problem is annotated with margin notes to provide additional meaning
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	+ All calculations are shown, neatly organized, and labeled
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	+ Check is completed

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| *Bachelor Level* |

**Directions: For each inequality, draw a bar model to solve, graph the solution, and check using at least two values.**

1. m – 5 > 20

1. $\frac{d}{4}$ ≥ 6

 3. $2.5 \leq \frac{p}{2}$

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| *Master Level* |

4. Use the inequality 6p > 27 to determine which statements below are true and which are false.

|  |  |  |
| --- | --- | --- |
| Statement | True | False |
| 4.5 is one possible value of p |  |  |
| P = 4.5 represents the solution set for the inequality |  |  |
| 5 is one possible value of p |  |  |
| When graphing the solution set, you would use an open circle |  |  |

5. Jenny saves $40 each week. She needs to save a minimum of $600 to go on a trip with her friends. Write, solve, and graph an inequality that represents how long Jenny will need to work to save up for her trip.

6. Using the inequality x > 7, select statements and number lines that can be represented by the inequality. Select all that apply.

* 1. The value of a number substituted for x is greater than 7
	2. Sam eats more than four servings of vegetables every day
	3. A temperature decreased by 7 degrees
	4. A number line from 0 to 10 with the integers 7 to 10 filled in
	5. A number line from 0 to 10 with an arrow starting at 7, but with an open circle on 7 and extending past 10.

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| *PhD Level* |

7. Solve the inequalities below. Draw a number line to graph the solution and check your solution using substitution. Try to figure out what is different about these two inequalities from the ones you solved in the Bachelors and Masters practices.

* 1. 7 – n > 3
	2. $\frac{28}{p}\leq 7$

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

* CFS for top quality work
	+ Problem is annotated with margin notes to provide additional meaning
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**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**EXIT TICKET**

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| Self-assessment | I mastered the learning objective today. | I am almost there.  | Need more practice and feedback. |
| Teacher feedback | You mastered the learning objective today. | You are almost there.  | You need more practice and feedback. |

For each inequality below, solve, graph the solution, and check your answer.

1. $20\geq m+7$
2. $3f<4$