Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_\_ Period: \_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_

**4.1A Writing Inequalities\_Classwork**

*Objective: write and graph inequalities; use substitution to check whether a number is a solution of an inequality. Preparing for Standard 7.EE.4b HW: 4.1A pg 128\_ #6-15 ALL*

*Read the statement. Circle each number that makes the statement true, and then answer the questions.*

1. *Why the number included or not included. 2) Write four other numbers that make the statement true.*



An \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a mathematical sentence that compares expressions. It contains the symbols \_\_\_\_\_\_\_, \_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_, or \_\_\_\_\_\_\_\_. To write an inequality, look for the following phrase to determine where to place the inequality symbol.

|  |  |  |
| --- | --- | --- |
| **SMYBOL** | **MEANING** | **WORD PHRASES** |
| $$<$$ | Is less than | Fewer than, below, is under, shorter than, smaller than, lower than, beneath, a better deal |
| $$>$$ | Is greater than | More than, exceed, above, over, larger than, increased, higher than |
| $$\leq $$ | Is less than or equal to | At most, no more than, maximum, up to |
| $$\geq $$ | Is greater than or equal to | At least, no less than, minimum  |

***Writing Inequalities***

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| **Inequality Word Statements:** *Write each statement with an inequality.*1. A number “x” is no more than -3.45. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. The product of 3 and (3x + 1) is at least 35. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. The minimum value of 2x + 1 is 13. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. When “x” is divided by 3 the quotient is more than 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. 10 is more than a number “m” times 50. \_\_\_\_\_\_\_\_\_\_\_\_
6. A number “b” minus 4.3 is less than -9.8 . \_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. A number “m” multiplied by -3.5 is at least $\frac{2}{5}.$ \_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. A number “m” times five is at most fifteen. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. A number “x” minus negative seven is less than or equal to five. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. The difference between a number “r” and seven is less than zero. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. The sum of a number “w” and seven is greater than or equal to fifteen. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
12. A number “x” is no less than fifteen. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
13. Twice a number “x” is less than twenty. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
14. The sum of a number “m” and nine is larger than thirty. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
 |

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a value that makes the inequality true. An inequality can have more than one solution. The set of all solutions of an inequality is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

***Tell whether each x value is a solution of following inequalities:***

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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|  |  |  |
| --- | --- | --- |
| **Value of x** | $$x+12>7$$ | **Is the inequality true?** |
| -2 |  |  |
| -8 |  |  |
| 5 |  |  |

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|  |  |  |
| --- | --- | --- |
| **Value of x** | $$\frac{x}{6}>-3$$ | **Is the inequality true?** |
| 2 |  |  |
| -3 |  |  |
| -24 |  |  |

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