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 |
|  | Is less than or equal to | At most, no more than, maximum, up to |
|  | 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 \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 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:***

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | **Value of x** |  | **Is the inequality true?** | | -2 |  |  | | -8 |  |  | | 5 |  |  | | |  |  |  | | --- | --- | --- | | **Value of x** |  | **Is the inequality true?** | | 2 |  |  | | -3 |  |  | | -24 |  |  | |