**Name:**

**Date:**

**School:**

**Facilitator:**

**2.04 Solving Inequalities**

**Total Points: 43**

This task requires you to create a graph. You have several options:

* Draw the graph by hand, then photograph or scan your graph;
* Use the Microsoft Word chart tools to graph your data; or
* Use the GeoGebra linked on the Task page of the lesson to create the graph; then, insert a screenshot of the graph into this task.

Match each inequality to the best verbal statement.

|  |  |  |
| --- | --- | --- |
|            | 1. *m* < 5
 | 1. all real numbers less than or equal to 5
 |
|            | 1. *m* > 5
 | 1. all real numbers greater than or equal to 5
 |
|            | 1. *m* > 5
 | 1. all real numbers less than 5
 |
|            | 1. 5 > *m*
 | 1. all real numbers greater than 5
 |

Match each inequality to the correct graph.

|  |  |  |
| --- | --- | --- |
|            | 1. *m* < 5
 | 1.
 |
|            | 1. *m* > 5
 | 1.
 |
|            | 1. *m* > 5
 | 1.
 |
|            | 1. 5 > *m*
 | 1.
 |

Solve and graph each inequality. Show **ALL** solution steps.

9.

|  |  |  |
| --- | --- | --- |
| *m* – 8 < 12           |  |  |
|  |  |  |       |       |       |       |       |       |

10.

|  |  |  |
| --- | --- | --- |
| 3*m* < –18           |  |  |
|  |  |  |       |       |       |       |       |       |

11.

|  |  |  |
| --- | --- | --- |
|            |  |  |
|  |  |  |       |       |       |       |       |       |

12.

|  |  |  |
| --- | --- | --- |
|            |  |  |
|  |  |  |       |       |       |       |       |       |

13.

|  |  |  |
| --- | --- | --- |
|            |  |  |
|  |  |  |       |       |       |       |       |       |

14.

|  |  |  |
| --- | --- | --- |
| –9 – 3*x*> –72           |  |  |
|  |  |  |       |       |       |       |       |       |

15.

|  |  |  |
| --- | --- | --- |
| 2*x* – 36 > –100           |  |  |
|  |  |  |       |       |       |       |       |       |

16.

|  |  |  |
| --- | --- | --- |
| 56 – 4*m* ≤ 2(2*m*+4)           |  |  |
|  |  |  |       |       |       |       |       |       |

17.

|  |  |  |
| --- | --- | --- |
| 8*m* + 90 < 3*m* – 60           |  |  |
|  |  |  |       |       |       |       |       |       |

18.

|  |  |
| --- | --- |
| –12 + 10*x* – 6 > 9*x* + 12 – 2*x*            |  |
|  |        |       |       |       |       |       |