Name:

Date:

School:

Facilitator:

2.05 Compound Inequalities

Total Points: 34

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 that represents the indicated conjunction or intersection.

|  |  |  |
| --- | --- | --- |
|  | 1. *m* < 5 or *m* > –2 | 1. all numbers greater than 5 or less than –2 |
|  | 1. *m* > 5 and *m* < –2 | 1. all numbers less than –2 and greater than 5 |
|  | 1. *m* > 5 or *m* < –2 | 1. all numbers less than 5 or greater than –2 |
|  | 1. 5 > *m* > –2 | 1. all numbers less than 5 and greater than –2 |

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

5.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| –2 < *y* – 4 < 1 |  | |  | | | | | | |
|  |  |  | |  |  |  |  |  |  |

6.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| –2*y* + 7 < 1 **or**  4*y* + 3 ≤ –5 |  | |  | | | | | | |
|  |  |  | |  |  |  |  |  |  |

7.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2*y* – 7 > 1 **or** 4*y* + 3 ≤ 5 |  | |  | | | | | | |
|  |  |  | |  |  |  |  |  |  |

8.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| –2 < 3*y* – 4 < 14 |  | |  | | | | | | |
|  |  |  | |  |  |  |  |  |  |

9.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 < < 3 |  | |  | | | | | | |
|  |  |  | |  |  |  |  |  |  |

10.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2*y* + 7 < –1 **or** –4*y* – 3 ≤ –5 |  | |  | | | | | | |
|  |  |  | |  |  |  |  |  |  |