Name:

Date:

School:

Facilitator:

1.03 Compound Inequalities

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

* Use the word tools;
* Draw the graph by hand, then photograph or scan your graph; 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.

**Solve each compound inequality and graph its solution. Express each answer in set notation as well. To graph the solution sets below, drag the appropriate lines and arrows to the number lines. Adjust the lengths of the lines and arrows as needed.**

1. 3*p* + 4 ≥ −14 and 1 – 5*p* ≥ -39  
Answer: numberline_1

Answer in set notation:

Show your work below for full credit.

2. 5*k* + 3 ≤ −32 or −4*k* + 7 < −29  
Answer: numberline_1

Answer in set notation:

Show your work below for full credit.

3. 8 – 6*x* < −28 or 9*x* + 5 < −31  
Answer: numberline_1

Answer in set notation:

Show your work below for full credit.

4. −12≤ 2x + 4 < 8  
Answer: numberline_1

Answer in set notation:

Show your work below for full credit.

5. 6*x* – 8 ≤ 7*x* + 5 or *x* + 3 ≤ –5 + 2*x*  
Answer: number_line_2

Answer in set notation:

Show your work below for full credit.

**Answer in a complete sentence. You must show all work.**

6. Amy and Katie have between $125 and $200 dollars to spend on jewelry for Christmas presents for their friends. If they buy 8 bracelets at $3.50 each and 6 necklaces at $12 each, how many pairs of earrings can they buy if they cost $6.00 each?

**Answer a complete sentence:**

**Show your work below for full credit.**