Solve the following inequalities. <u>Circle a final graph and final solution.</u> Show all work;

1. $-8 \leq 3x + 1 < 16$	**2.** $2x - 5 > 3$ OR $4x + 2 < -14$
3. $x - 4 < 2$ OR $x + 3 > 1$	**4.** $3x + 5 < 2$ AND $x - 1 > 4$
5. $-3(x + 2) \leq 15$ AND $2x + 4 < 14$	**6.** $5x - 7 \geq 8$ AND $2x + 1 \geq 11$
Write a compound inequality for each situation below. Be sure to define your variable and use appropriate units! DEFINE your variable.	7. **Wait Times:** The wait time for a popular restaurant is usually between 45 minutes and 90 minutes on a Friday night, depending on the party size. Write a compound inequality for the Friday night wait times. Define variable:

8. **Chemical Storage:** A certain chemical must be stored at a temperature between 35°F and 45°F, inclusive. Write a compound inequality for the temperatures the chemical must be stored at. Define variable:	9. **Speed Limits:** The speed limit on an interstate is 70 mph, and the minimum speed is 45 mph. Write a compound inequality for the speed limit on the interstate. Define variable:
10. **Discount Eligibility**: A museum offers free admission to children under 5 years old and senior citizens 65 years old or older. Write a compound inequality for the people who get discounts. Define variable:	11. **Soil pH Levels:** A particular plant will die if the soil pH drops below 5.5 or rises above 7.5. Write an inequality representing the *good* pH levels for the plant Define variable:
12. **Part Tolerance**: A machine part is supposed to be 15 cm long. Quality control will accept the part if it is within a tolerance of 0.1 cm of the target length (inclusive). Write a compound inequality for the acceptable lengths. Define variable:	13. **Letter Grade:** To earn a B in math class, a student's final average must be at least an 80% but strictly less than 90%. Write an inequality for the presents needed to get a B. Define variable:
14. **Hurricane Warnings**: A category 3 hurricane has sustained winds of at least 111 mph but no more than 129 mph. Write a compound inequality for the wind speed of a category 3 hurricane. Define variable:	15. **Water States**: Water is not in a liquid state if its temperature is strictly below 0°C or strictly above 100°C. Write an inequality for when water is a liquid. Define variable:
16. Write the simplest inequality that represents the graph.  	17. Write the simplest inequality that represents the graph. 