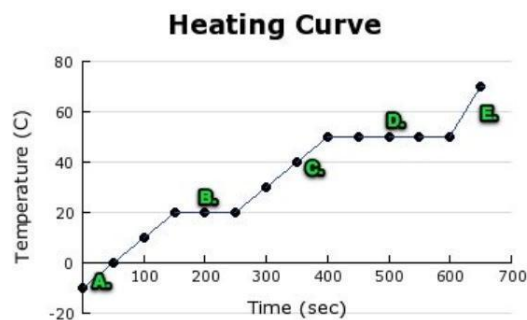


## Section 2C Review

1) Using the following heating curve, fill in the table:

Part of the curve	State(s) of Matter	Process that is happening	Temperature Range
A			
B			
C			
D			
E			

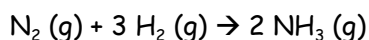


3) Earth's atmosphere is composed of a mixture of gases. List the three most plentiful gases found in the atmosphere.

4) List three changes in the atmosphere as the altitude increases from sea level to high altitude.

5) Sketch and label the four layers of the atmosphere.

6) This equation represents the production of ammonia (NH<sub>3</sub>) by the reaction of nitrogen gas with hydrogen gas:



a) If 1 mol N<sub>2</sub>(g) reacts with 3 mol H<sub>2</sub>(g) in a flexible container at constant temperature and pressure, would you expect the total gas volume to increase or decrease? Why?

b) How many moles of NH<sub>3</sub> would form if 12.0 mol N<sub>2</sub> react completely with hydrogen gas?

7) In a chemical reaction, 1 L hydrogen gas (H<sub>2</sub>) reacts with 1 L chlorine gas (Cl<sub>2</sub>) to produce 2 L hydrogen chloride gas (HCl). All volumes are measured at the same temperature and pressure.

a) Write a balanced chemical reaction.

b) If 19 L of H<sub>2</sub> gas react, how many liters of Cl<sub>2</sub> gas will need to react with it? How many liters of HCl gas will be made?

8a) Draw a homogeneous mixture of three different compounds.

8b) Draw a heterogeneous mixture of a compound and an element.

9a) Generation of carbon dioxide for the lab we did happened in a syringe. Why couldn't we do the mixing in a beaker?

9b) What are the 4 properties of carbon dioxide we observed from the lab?

10) Rank the different types of electromagnetic radiation from lowest to highest energy.

11) List one use of each of the 7 types of EM radiation.

12) What is the greenhouse effect? What are the greenhouse gases?

13) List one piece of information that suggests humans are causing climate change. Also, list one piece of information that climate change is a naturally occurring process.