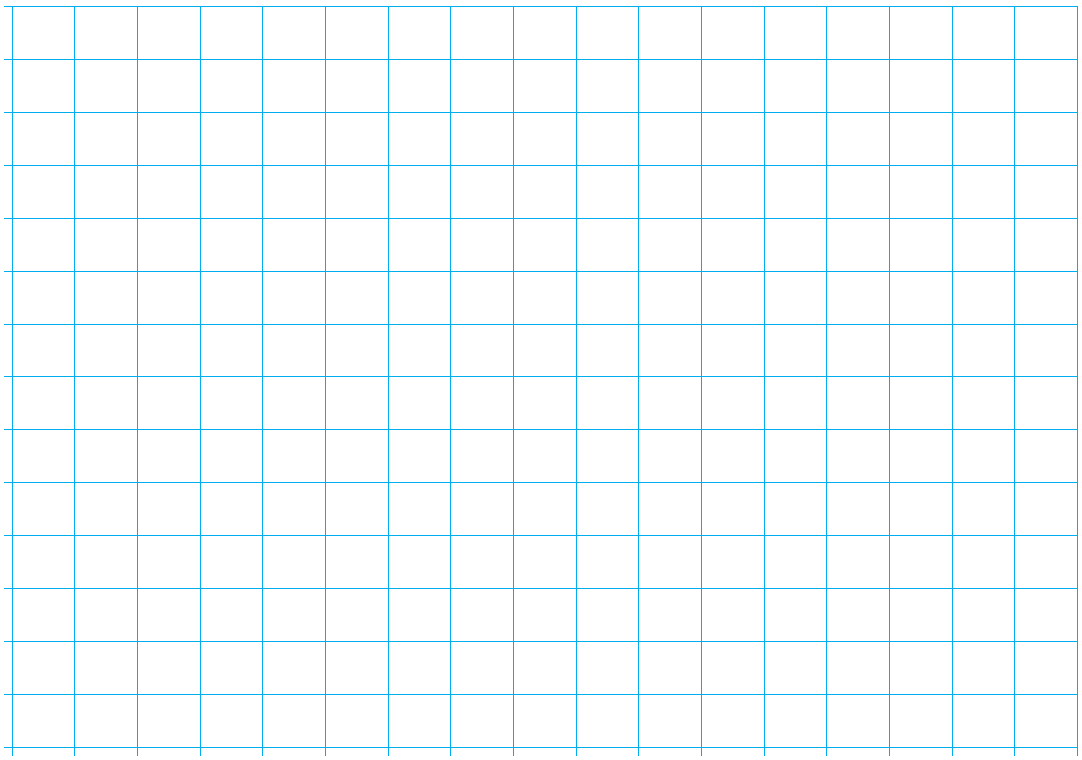
Graphing Reactions

1. a. Graph the following information about an experiment that Gina did in her Science class where she reacted hydrochloric acid and calcium carbonate together then measured the amount of carbon dioxide gas made over time.

Time (s)	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34
Amount of Gas (mL)	0	0	2.5	5	10	15	25	28	29	30	32	33	34	35	35	35	35	35



b. At what time did the reaction stop making gas?

c. What was the maximum amount of gas made in the reaction?

d. How long did it take for the reaction to finish?

e. How long did it take for the reaction to start making gas?

f. Because Gina used calcium carbonate, we can guess the name of the gas made in this experiment is: (Circle your answer.)

oxygen nitrogen carbon dioxide hydrogen

g. Because gas was made, we would see BUBBLES / STEAM in the liquid in the beaker. (Circle your answer.)

h. Because gas was made, we would hear A SQUEAKY POP / FIZZING if we listened to the beaker. (Circle your answer.)

2. a. Below is the temperature change of water in a sealed container as it is heated from ice over time on a Bunsen burner. Draw a graph to show this information.

Time (s)	0	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300
Temperature (°C)	-10	-5	0	0	0	20	40	60	80	100	100	100	100	100	110	120

b. What temperature was the ice?

c. At what temperature do you think the ice melted?

d. How long did it take the water to reach 100ºC?

e. What was the hottest temperature that the water reached?

f. What happened to the water when it reached 100ºC?

g. Match each of the diagrams below to the temperature that you think they are showing. The temperatures are 0ºC, 100ºC, 120ºC, -10ºC and 25ºC. Write the correct temperature underneath each one.