

Appendix 3. Experiment 2

Necessary Materials: large glass container, balance scales, weight set, 3 Erlenmeyer flasks, 3 thermometers, 3 spirit stoves, 3 tripods, stopwatch, matches or lighters, tap water

Construction stages

- Fill the wide glass container with tap water.
- Measure 50g, 100g, 150g of water with the help of a balance scale, and pour it into the Erlenmeyer flask.
- Measure the temperature of the water in the Erlenmeyer flask with a thermometer, and record the measurement results in the table.
- Place the Erlenmeyer flask on the tripod. Light the identical spirit stoves that you put under the tripods at the same time.
- Measure the temperature of the liquids in the Erlenmeyer flask at two-minute intervals. Record the measurement results in the table below.

Answer the following questions based on the data you obtained during the experiment.

1) Write your hypothesis.

2) Record in the table after how many minutes the liquids in the Erlenmeyer flask start to boil.

The amount of water	Initial temperature	The temperature of the water after 2 minutes	The temperature of the water after 4 minutes	The temperature of the water after 6 minutes	After how many minutes does the water start to boil?
50g Water	0				
100g of Water	0				
150g Water	0				

3) Determine the dependent and independent variable according to the table you filled in above.

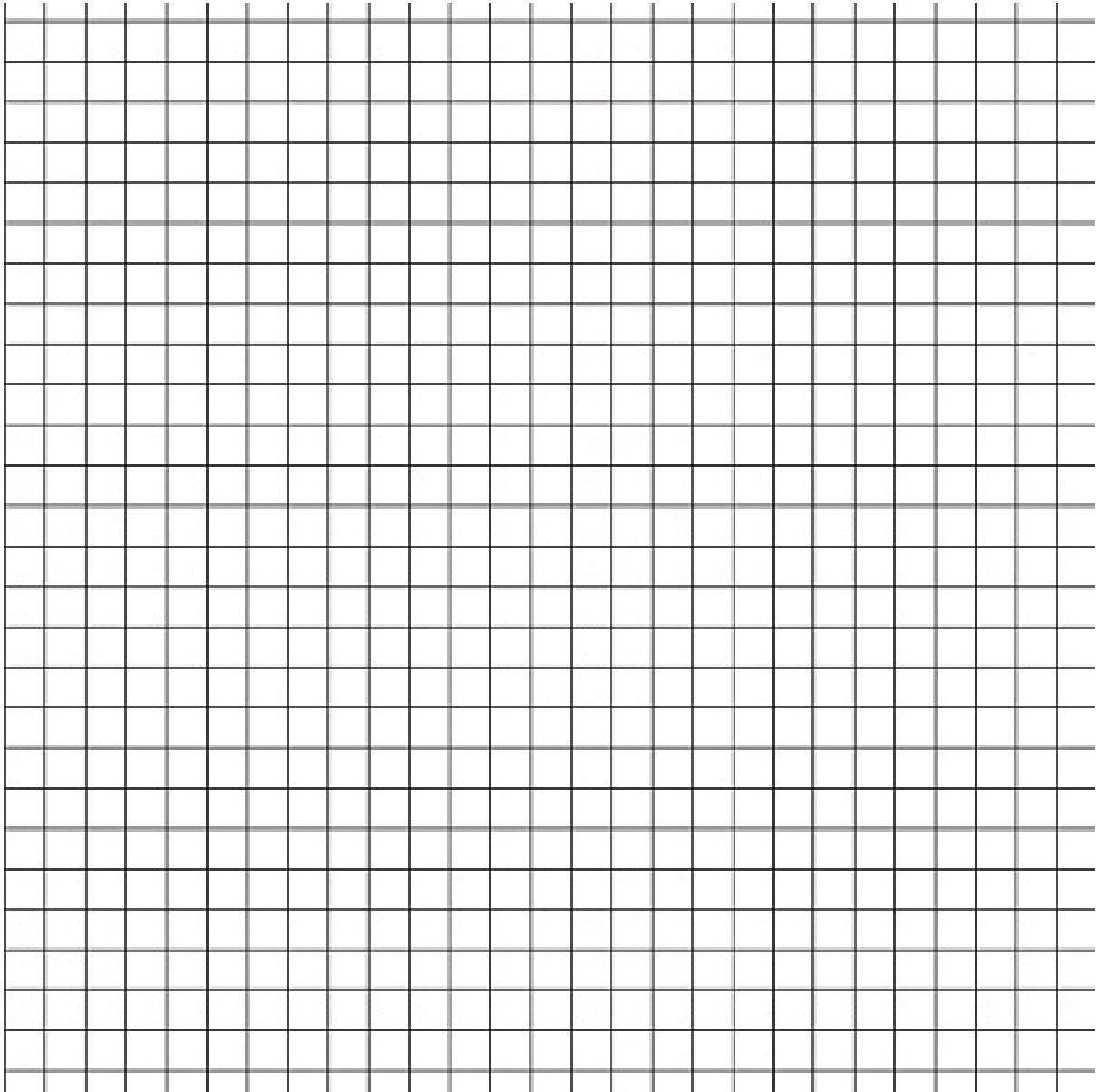
Dependent variable:

Independent variable:

4) Write the dependent and independent variable in the table below. Write the changes of the dependent and independent variables using the table above.

Dependent variable ()	Independent variable ()

5) Graph the data of the dependent and independent variable.



6) Write an equation to find the temperature of the dependent variable at the desired time.

Experiment 3

Necessary Materials: large glass container, balance scales, weight set, 3 Erlenmeyer flasks, 3 thermometers, 3 spirit stoves, 3 tripods, stopwatch, matches or lighters, tap water

Construction stages

- Fill the wide glass container with tap water.
- Measure 50 g, 100 g, 150 g of water with the help of a balance scale, and pour it into the Erlenmeyer flask.
- Measure the temperature of the water in the Erlenmeyer flask with a thermometer, and record the measurement results in the table.
- Place the Erlenmeyer flask on the tripod. Light the identical spirit stoves that you put under the tripods at the same time.
- Measure the temperature of the liquids in the Erlenmeyer flask at two-minute intervals. Record the measurement results in the table below.

Answer the following questions based on the data you obtained during the experiment.

1) Write your hypothesis.

2) Record in the table after how many minutes the liquids in the Erlenmeyer flask start to boil.

The amount of water	The temperature of the water after 2 minutes	The temperature of the water after 4 minutes	The temperature of the water after 6 minutes	After how many minutes does the water start to boil?
50g Water				
100g of Water				
150g Water				

3) Determine the dependent and independent variable according to the table you filled above.

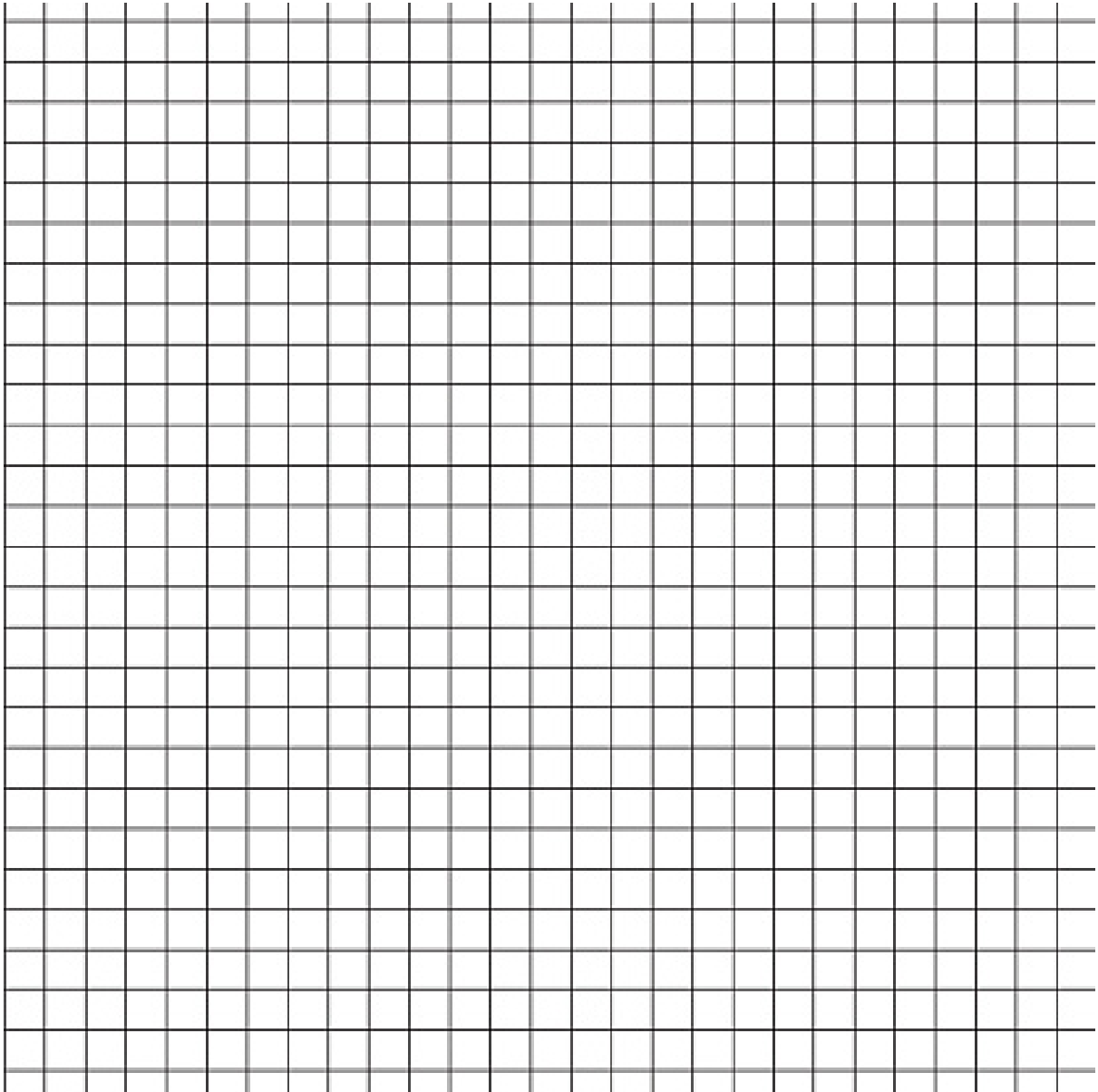
Dependent variable:

Independent variable:

4) Write the dependent and independent variable in the table below. Write the changes of the dependent and independent variables using the table above.

Dependent variable ()	Independent variable ()

5) Graph the data of the dependent and independent variable.



6) Write an equation to find the temperature of the dependent variable at the desired time.