Name _____ Date _____

Worksheet 12.1: Enthalpy change zinc + copper sulfate practical

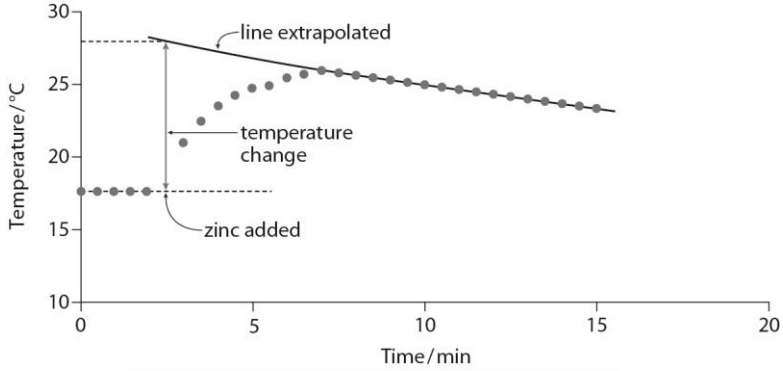
Analysis of results

1 Record your observations from the experiment, including those which could be evaluated as sources of errors.

2 Record raw quantitative data in a table. You need to include units and absolute uncertainties where appropriate.

3 Draw a graph of temperature against time.

4 Extrapolate what the highest temperature would have been when the zinc was added (see graph below).



5 Calculate the energy released, q, using $q = mc\Delta T$, using the temperature calculate above.

6 Work out which reactant was in excess and then work out the moles of the limiting reactant.

7 Calculate the enthalpy change for this reaction.

Evaluation of the experiment

8 Why did you extrapolate the highest temperature from the graph rather than use the actual highest temperature reached?

9 What assumptions did you make when calculating the enthalpy change for this reaction?