



## Physics 2 Report

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# 1 Lab 1 - Specific Heat Capacity by Electrical Heating

## 1.1 Introduction

By electrically heating a lagged metal block and carefully noting the rate of heating and the temperature changes caused, the specific heat capacity of a metal can be evaluated by plotting a suitable graph.

Table of measurements:

V (volt)	I (Ampere)	t (s)	Temp (°C)	$\Delta T$	Q (mc $\Delta T$ )
0	0	0	17	0	0
8.34	1.34	120	20.5	3.5	2702.16
8.34	1.34	240	27	10	5404.32
8.34	1.38	360	35	18	8106
8.4	1.38	480	43	26	10808
8.3	1.38	600	51	34	13510.8

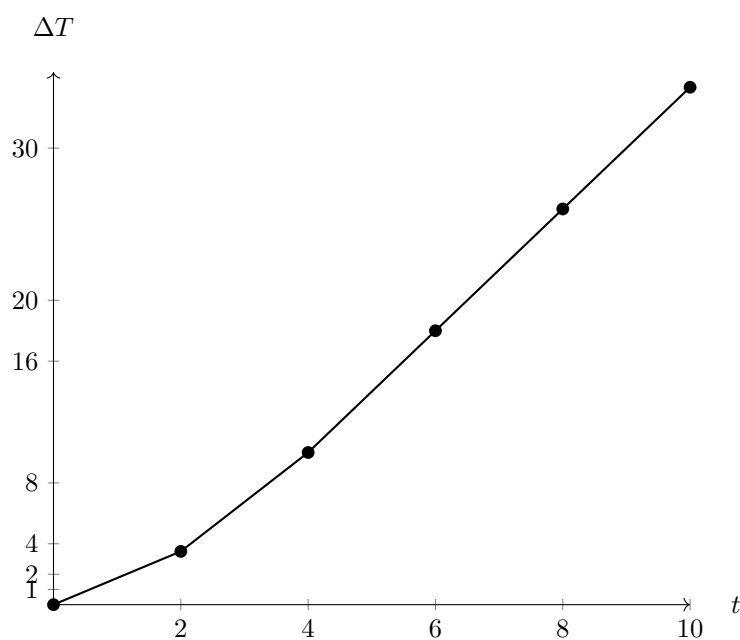


Figure 1: Graph of  $\Delta T$  against  $t$

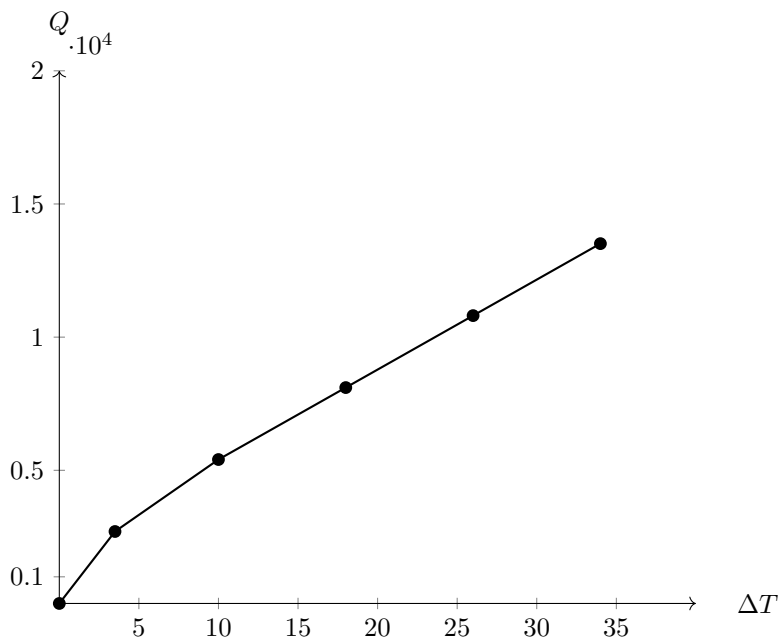


Figure 2: Graph of  $Q$  against  $\Delta T$

## 1.2 Conclusion

We found the slope coefficient which 379,9975. We just divide the slope by the mass of the material to get the specific heat capacity of the material. The specific heat capacity of the material is 385 J/kg°C. Which exactly matches **the specific heat capacity of the material we were testing.**