3. (15 points)

A student is measuring the magnetic field generated by a long, straight wire carrying a constant current. A magnetic field probe is held at various distances $d$ from the wire, as shown above, and the magnetic field is measured. The graph below shows the five data points the student measured and a best-fit curve for the data. Unfortunately, the student forgot about Earth’s magnetic field, which has a value of $5.0 \times 10^{-5} \text{T}$ at this location and is directed north.

(a) On the graph, plot new points for the field due only to the wire.
(b) Calculate the value of the current in the wire.