Physics 112 Laboratory Report
Ampere's Law

Name _____ Date_____

Lab Partner _____

Single coil energized

Normalization factor B_0 _____

Step size *ds* _____

Attach a sketch showing the integration paths you used, the direction the path was traversed, and the relative directions of any currents going through the path.

Path name	$\sum B$ (volts)	$\frac{1}{B_0}\sum B \bullet ds$ (cm)	Expected result (cm)

Normalization for two-coil geometry

Voltage on 0.5 Ω resistor for one coil energized V_1 _____

Voltage on 0.5 Ω resistor for both coils energized in series V_2 _____

Normalization constant for two-coils B_0' _____

Do the coil currents flow in the same or opposite directions? _____

Both coils energized

Step size *ds* _____

Attach a sketch showing the integration paths you used, the direction the path was traversed, and the relative directions of any currents going through the path.

Path name	$\sum B$ (volts)	$\frac{1}{B_0'}\sum B \bullet ds$ (cm)	Expected result (cm)

Interpret your results in terms of Ampere's Law.