

62. For two long parallel wires separated by a distance d , carrying currents I_1 and I_2 as in Fig. 28-10, show directly (Eq. 28-1) that Ampère's law is valid (but do not use Ampère's law) for a circular path of radius r ($r < d$) centered on I_1 :

$$\oint \vec{\mathbf{B}} \cdot d\vec{\ell} = \mu_0 I_1.$$