

**29.1.** A flat, rectangular coil consisting of 50 turns measures 25.0 cm by 30.0 cm. It is in a uniform, 1.20-T, magnetic field, with the plane of the coil parallel to the field. In 0.222 s, it is rotated so that the plane of the coil is perpendicular to the field. (a) What is the change in the magnetic flux through the coil due to this rotation? (b) Find the magnitude of the average emf induced in the coil during this rotation.