

**FIGURE P12-2**

Problems 12-10 to 12-11

- †‡12-10 Figure P12-2a shows a fourbar linkage and its dimensions in meters. The steel crank and rocker have uniform cross sections of 50 mm wide by 25 mm thick. The aluminum coupler is 25 mm thick. The crank O_2A rotates at a constant speed of $\omega = 40$ rad/sec. Design counterweights to force balance the linkage and determine its change in peak torque versus the unbalanced condition.
- †‡12-11 Figure P12-2b shows a fourbar linkage and its dimensions in meters. The steel crank and rocker have uniform cross sections of 50 mm wide by 25 mm thick. The aluminum coupler is 25 mm thick. The crank O_2A rotates at a constant speed of $\omega = 50$ rad/sec. Design counterweights to force balance the linkage and determine its change in peak torque versus the unbalanced condition.

* Answers in Appendix F.

† These problems are suited to solution using *Mathcad*, *Matlab*, or *TKSolver* equation solver programs.