

**FIGURE P12-4****Problem 12-14**

- ^{*†}12-14 Figure P12-4 shows a system with two weights on a rotating shaft. $W_1 = 20 \text{ lb @ } 45^\circ$ at a 6-in radius and $W_2 = 15 \text{ lb @ } 300^\circ$ at a 4-in radius. Determine the radii and angles of the balance weights needed to dynamically balance the system. The balance weight in plane 3 weighs 20 lb and in plane 4 weighs 40 lb.

* Answers in Appendix F.

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