

**FIGURE P9-6**

Problems 9-37 to 9-38 From P. H. Hill and W. P. Rule. (1960). *Mechanisms: Analysis and Design*, with permission

\*†9-37 Figure P9-6a shows an epicyclic train with its tooth numbers. The arm is driven CCW at 50 rpm and gear *A* on shaft 1 is fixed to ground. Find speed of gear *D* on shaft 2. What is the efficiency of this train if the basic gearsets have  $E_0 = 0.96$ ?

†9-38 Figure P9-6b shows a differential with its tooth numbers. Gear *A* is driven CCW at 10 rpm and gear *B* is driven CW at 24 rpm. Find the speed of gear *D*.

\* Answers in Appendix F.

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