



FIGURE P9-5

Problems 9-35 to 9-36 From P. H. Hill and W. P. Rule, (1960). *Mechanisms: Analysis and Design*, with permission

^{*†}9-35 Figure P9-5a shows a compound epicyclic train used to drive a winch drum. Gear A is driven at 18 rpm CW and gear D is fixed to ground. Tooth numbers are in the figure. Find speed and direction of the drum. What is train efficiency for gearsets $E_0 = 0.97$?

[†]9-36 Figure P9-5b shows a compound epicyclic train with its tooth numbers. The arm is driven CCW at 20 rpm. Gear A is driven CW at 40 rpm. Find speed of ring gear D.

* Answers in Appendix F.

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