



**FIGURE P6-31**

Problem 6-87 An aircraft overhead bin mechanism - dimensions in inches

- 6-86 Find all instant centers of the linkage in Figure P6-31 in the position shown.
- 6-87 Find the angular velocities of links 3 and 4, and the linear velocity of point  $P$  in the  $XY$  coordinate system for the linkage in Figure P6-31 in the position shown. Assume that  $\theta_2 = -88.72^\circ$  in the  $XY$  coordinate system and  $\omega_2 = 1$  rad/sec. The position of the coupler point  $P$  on link 3 with respect to point  $A$  is:  $p = 15.00$ ,  $\delta_3 = 0^\circ$ .
  - a. Using a graphical method.
  - b. Using the method of instant centers.
  - †c. Using an analytical method.

† These problems are suited to solution using *Mathcad*, *Matlab*, or *TKSolver* equation solver programs. In most cases, your solution can be checked with program FOURBAR.