

**FIGURE P4-15**

Problems 4-29 to 4-30

- ^{*†}4-29 For the linkage in Figure P4-15, find its limit (toggle) positions in terms of the angle of link O_2A referenced to the line of centers O_2O_4 when driven from link O_2A . Then calculate and plot the angular displacement of links 3 and 4 and the path coordinates of point P between those limits, with respect to the angle of the input crank O_2A over its possible range of motion referenced to the line of centers O_2O_4 .
- ^{*†}4-30 For the linkage in Figure P4-15, find its limit (toggle) positions in terms of the angle of link O_4B referenced to the line of centers O_4O_2 when driven from link O_4B . Then calculate and plot the angular displacement of links 2 and 3 and the path coordinates of point P between those limits, with respect to the angle of the input crank O_4B over its possible range of motion referenced to the line of centers O_4O_2 .

* Answers in Appendix F.

† 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, SLIDER, or SIXBAR.