

**FIGURE P4-18**

Elliptical trammel -
Problem 4-58

- 4-58 The elliptical trammel in Figure P4-18 must be driven by rotating link 3 in a full circle. Derive analytical expressions for the positions of points A , B , and a point C on link 3 midway between A and B as a function of θ_3 and the length AB of link 3. Use a vector loop equation. (Hint: Place the global origin off the mechanism, preferably below and to the left and use a total of 5 vectors.) Code your solution in an equation solver such as *Mathcad*, *Matlab*, or *TKSolver* to calculate and plot the path of point C for one revolution of link 3.

* This figure is provided as an animated Working Model file on the CD-ROM. Its filename is the same as that of Figure P6-32.