8-3 Figure P8-2 shows a cam and follower. Using graphical methods, find and sketch the equivalent fourbar linkage for this position of the cam and follower.

*8-4 Figure P8-2 shows a cam and follower. Using graphical methods, find the pressure angle at the position shown.

8-5 Figure P8-3 shows a cam and follower. Using graphical methods, find and sketch the equivalent fourbar linkage for this position of the cam and follower.

*8-6 Figure P8-3 shows a cam and follower. Using graphical methods, find the pressure angle at the position shown.

‡8-7 Design a double-dwell cam to move a follower from 0 to 2.5" in 60°, dwell for 120°, fall 2.5" in 30°, and dwell for the remainder. The total cycle must take 4 sec. Choose suitable functions for rise and fall to minimize accelerations. Plot the *s v a j* diagrams.

‡8-8 Design a double-dwell cam to move a follower from 0 to 1.5" in 45°, dwell for 150°, fall 1.5" in 90°, and dwell for the remainder. The total cycle must take 6 sec. Choose suitable functions for rise and fall to minimize velocities. Plot the *s v a j* diagrams.

‡8-9 Design a single-dwell cam to move a follower from 0 to 2" in 60°, fall 2" in 90°, and dwell for the remainder. The total cycle must take 2 sec. Choose suitable functions for rise and fall to minimize accelerations. Plot the *s v a j* diagrams.

‡8-10 Design a three-dwell cam to move a follower from 0 to 2.5" in 40°, dwell for 100°, fall 1.5" in 90°, dwell for 20°, fall 1" in 30°, and dwell for the remainder. The total cycle must take 10 sec. Choose suitable functions for rise and fall to minimize velocities. Plot the *s v a j* diagrams.

‡8-11 Design a four-dwell cam to move a follower from 0 to 2.5" in 40°, dwell for 100°, fall 1.5" in 90°, dwell for 20°, fall 0.5" in 30°, dwell for 40°, fall 0.5" in 30°, and dwell for the remainder. The total cycle must take 15 sec. Choose suitable functions for rise and fall to minimize accelerations. Plot the *s v a j* diagrams.

‡8-12 Size the cam from Problem 8-7 for a 1" radius roller follower considering pressure angle and radius of curvature. Use eccentricity only if necessary to balance those functions. Plot both those functions. Draw the cam profile. Repeat for a flat-faced follower. Which would you use?

‡8-13 Size the cam from Problem 8-8 for a 1.5" radius roller follower considering pressure angle and radius of curvature. Use eccentricity only if necessary to balance those functions. Plot both those functions. Draw the cam profile. Repeat for a flat-faced follower. Which would you use?

‡8-14 Size the cam from Problem 8-9 for a 0.5" radius roller follower considering pressure angle and radius of curvature. Use eccentricity only if necessary to balance those functions. Plot both those functions. Draw the cam profile. Repeat for a flat-faced follower. Which would you use?

‡8-15 Size the cam from Problem 8-10 for a 2" radius roller follower considering pressure angle and radius of curvature. Use eccentricity only if necessary to balance those functions. Plot both those functions. Draw the cam profile. Repeat for a flat-faced follower. Which would you use?

‡8-16 Size the cam from Problem 8-11 for a 0.5" radius roller follower considering pressure angle and radius of curvature. Use eccentricity only if necessary to balance those functions. Plot both those functions. Draw the cam profile. Repeat for a flat-faced follower. Which would you use?

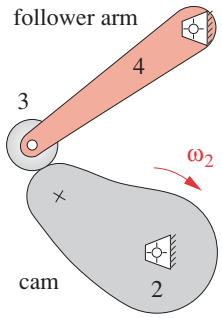

FIGURE P8-2
Problems 8-3 to 8-4

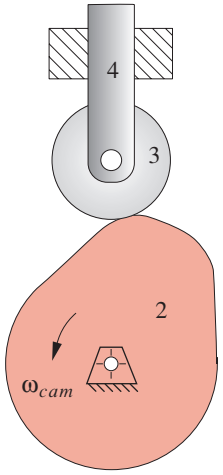

FIGURE P8-3
Problems 8-5 to 8-6

* Answers in Appendix F.

‡ These problems are suited to solution using program DYNACAM, which is on the attached DVD.