



FIGURE P4-2

Problems 4-9 to 4-10 Open configuration and terminology for a fourbar slider-crank linkage

\*4-9 The link lengths and the value of  $\theta_2$  and offset for some fourbar slider-crank linkages are defined in Table P4-2. The linkage configuration and terminology are shown in Figure P4-2. For the rows assigned, draw the linkage to scale and graphically find all possible solutions (both open and crossed) for angle  $\theta_3$  and slider position  $d$ .

\*†4-10 Repeat Problem 4-9 except solve by the vector loop method.

TABLE P4-2 Data for Problems 4-9 to 4-10

Row	Link 2	Link 3	Offset	$\theta_2$
a	1.4	4	1	45
b	2	6	-3	60
c	3	8	2	-30
d	3.5	10	1	120
e	5	20	-5	225
f	3	13	0	100
g	7	25	10	330

\* This figure is provided as an animated Working Model file and as a Matlab file on the CD-ROM. Its filename is the same as the figure number.

\* 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*.