



FIGURE P4-1

Problems 4-6 to 4-7. General configuration and terminology for the fourbar linkage

* 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.

*4-6 The link lengths and the value of θ_2 for some fourbar linkages are defined in Table P4-1. The linkage configuration and terminology are shown in Figure P4-1. For the rows assigned, draw the linkage to scale and graphically find all possible solutions (both open and crossed) for angles θ_3 and θ_4 . Determine the Grashof condition.

*†4-7 Repeat Problem 4-6 except solve by the vector loop method.

TABLE P4-1 Data for Problems 4-6, 4-7 and 4-13 to 4-15

Row	Link 1	Link 2	Link 3	Link 4	θ_2
a	6	2	7	9	30
b	7	9	3	8	85
c	3	10	6	8	45
d	8	5	7	6	25
e	8	5	8	6	75
f	5	8	8	9	15
g	6	8	8	9	25
h	20	10	10	10	50
i	4	5	2	5	80
j	20	10	5	10	33
k	4	6	10	7	88
l	9	7	10	7	60
m	9	7	11	8	50
n	9	7	11	6	120

* 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.