

[Remarks:](#) See § 7.4, pages 514 to 520

[Answer](#)

a)

Member	Force(kN)	$\Delta L$ (mm)
1	$15\sqrt{2}$	3
2	-15	$-1.5\sqrt{2}$
3	15	$1.5\sqrt{2}$
4	15	$1.5\sqrt{2}$
5	$-15\sqrt{2}$	-3

Assuming the direction of AD is fixed and removing the support at B:

Joint	$u_x$ (mm)	$u_y$ (mm)
A	0	0
B	-4.5	10.5
C	3	0
D	-1.5	-1.5

b)

Joint	$u_x$ (mm)	$u_y$ (mm)
A	0	0
B	-0.75	-0.75
C	3	-7.5
D	2.25	-5.25