SOLUTIONS TO TUTORIAL EXAMPLES

CHAPTER 11

The symbols used in the table below are the same as those used in Chapter 11, as follows:

       m = number of members
       j = number of joints
       r = number of restraints

       For each roller support r = 1
       For each pinned support r = 2
       For each fixed support r = 3

       SD = statically determinate

       SI = statically indeterminate (contains redundant members)

       Mech = a mechanism (unstable)

       > means 'greater than'
       < means 'less than' (standard mathematical symbols)

	m	j	2j	r	m+ r	Is (m+r) = 2j ?	Stability Type
Question 1	8	6	12	4	12	=	SD
Question 2	7	5	10	3	10	=	SD
Question 3	6	4	8	3	9	>	SI
Question 4	14	9	18	4	18	=	SD
Question 5	12	8	16	3	15	<	Mech

In Question 3, any one member could be removed and the frame would still be stable.

In Question 5, a diagonal member BG or HE would ensure stability.