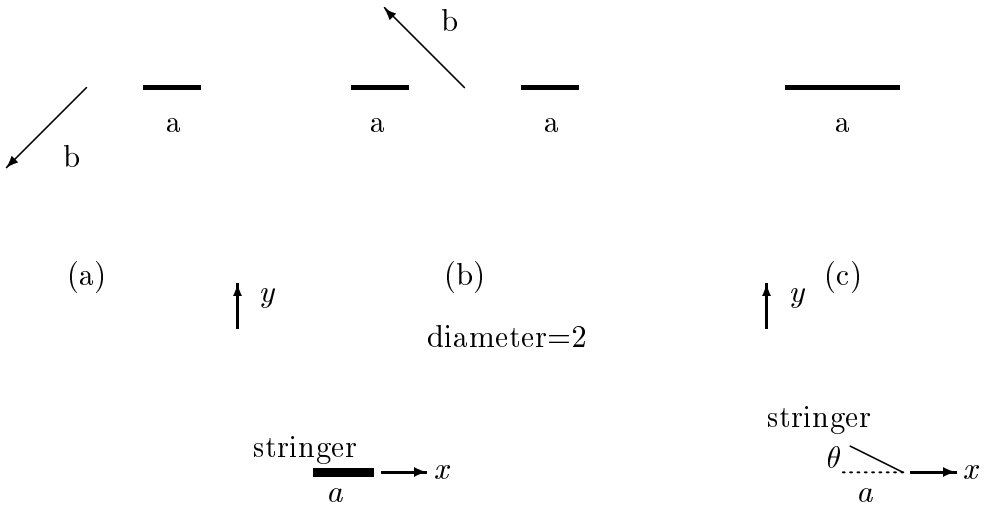
程式14-2 Membrane with stringers



symmetry case unsymmetry case

1. Problem statement:
Governing equation:

$$(\nabla^2 + k^2)u(r,\theta) = 0, (r,\theta)\ in\ D$$

Boundary conditions:

$$u(r,\theta) = 0\ (r,\theta)\ on\ the\ boundaries$$

2. Output:
convergence test for eigenfrequencies and eigenmodes

3. Table 1 for edge stringer problem ($b = 1$)

$k^2 \searrow 0.5a \rightarrow$	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
1	(5.78)										
2	(14.68)										
3	(26.37)										

4. Table 2 for double stringer problem ($b = 1$)

$k^2 \searrow 0.5a \rightarrow$	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
1											
2											

References

[1] J. T. Chen, M. T. Liang, I. L. Chen, S. W. Chyuan and K. H. Chen, 1999, Dual boundary element analysis of wave scattering from singularities, Wave Motion, Vol.30, No.4, pp.367-381. (SCI and EI)