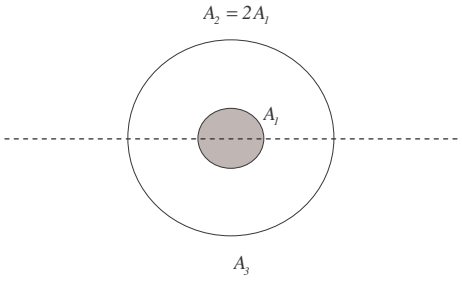
13.01

b



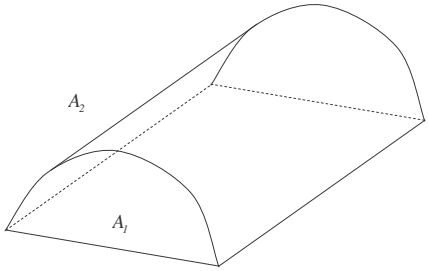
A_1 *is convex* $\Rightarrow$ $F_{11} = 0$

symmetry $\Rightarrow$ $F_{12} = F_{13}$

summation rule $\Rightarrow$ $F_{12} + F_{13} = 1 \quad \Rightarrow \quad F_{12} = F_{13} = 0.5$

reciprocity rule $\Rightarrow$ $F_{21} = \frac{A_1}{A_2} F_{12} = \frac{A_1}{2A_1} 0.5 = 0.25$

c



$$\begin{bmatrix} F_{11} & F_{12} \\ F_{21} & F_{22} \end{bmatrix}$$

A_1 *is convex* $\Rightarrow$ $F_{11} = 0$

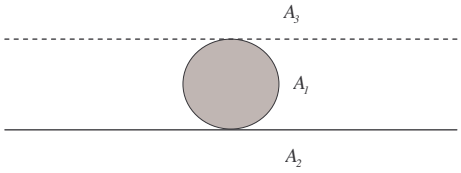
summation rule $\Rightarrow$ $F_{12} = 1$

$$\begin{bmatrix} 0 & 1 \\ F_{21} & F_{22} \end{bmatrix}$$

reciprocity rule $\Rightarrow$ $F_{21} = \frac{A_1}{A_2} F_{12} = \frac{2R \cdot L}{\pi R \cdot L} \cdot 1 = \frac{2}{\pi}$

summation rule $\Rightarrow$ $F_{21} + F_{22} = 1 \quad \Rightarrow \quad F_{22} = 1 - \frac{2}{\pi}$

e



A_1 *is convex* $\Rightarrow$ $F_{11} = 0$

symmetry $\Rightarrow$ $F_{12} = F_{13}$

summation rule $\Rightarrow$ $F_{12} + F_{13} = 1 \quad \Rightarrow \quad F_{12} = F_{13} = 0.5$

reciprocity rule $\Rightarrow$ $F_{21} = \frac{A_1}{A_2} F_{12} = 0 \cdot 0.5 = 0$