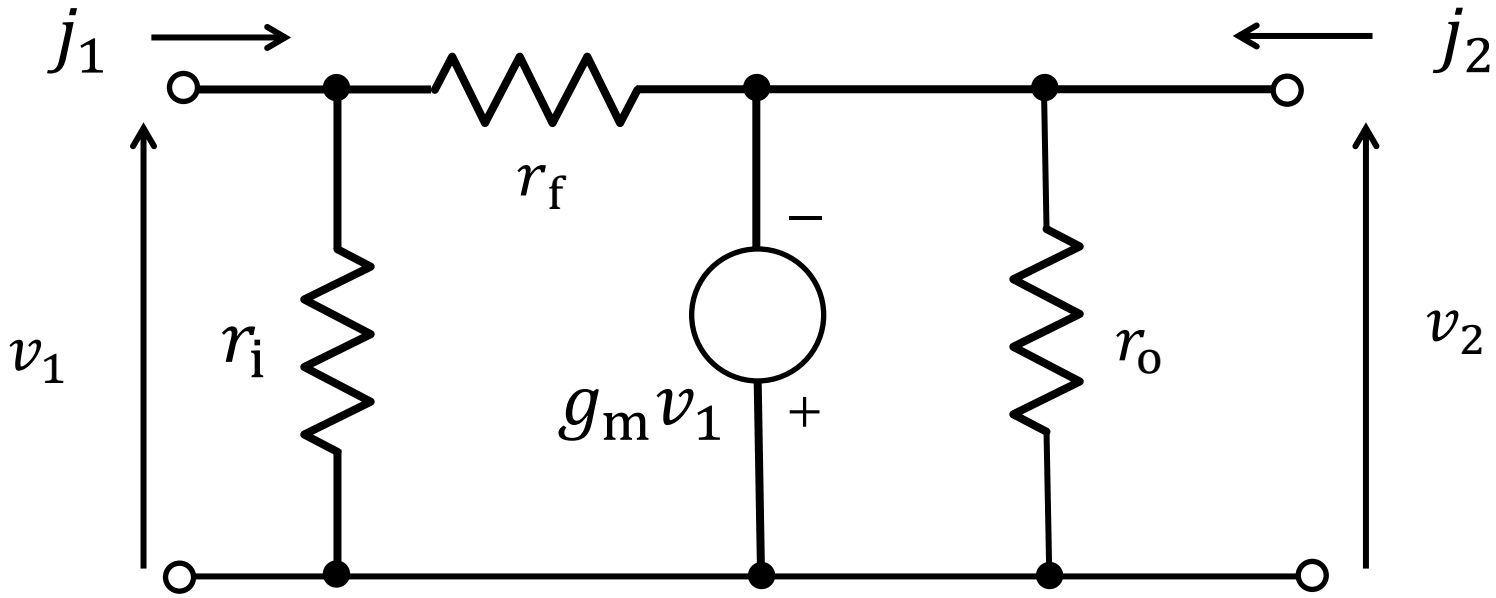
Exercise D-1



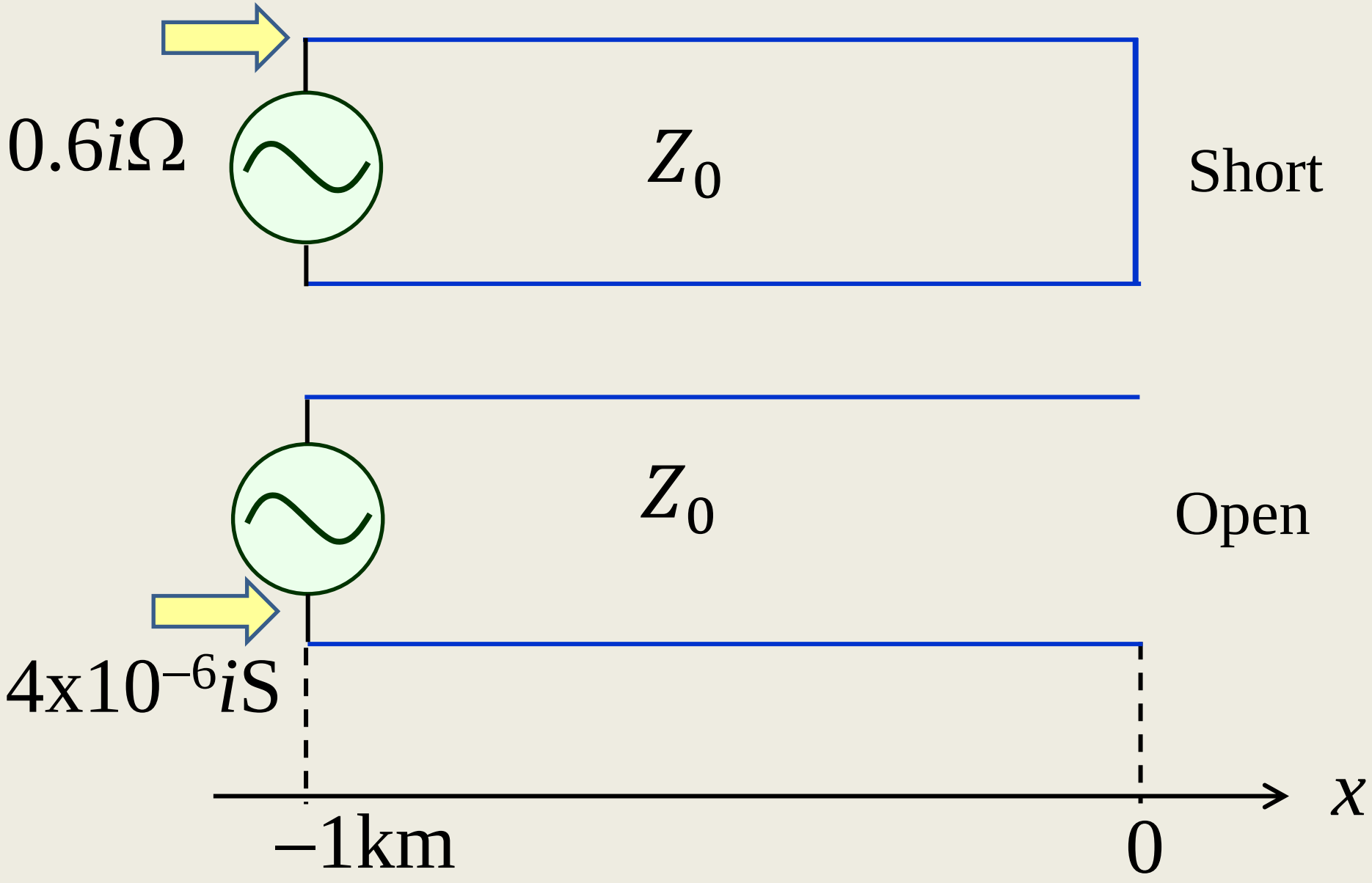
Obtain the Y matrix for the above equivalent circuit (π-shape circuit).

Exercise D-2

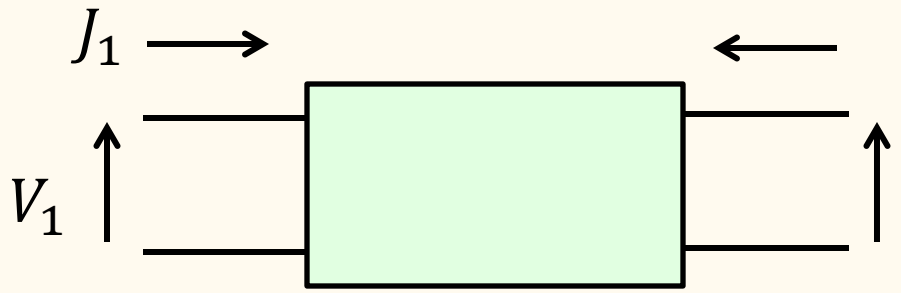
l =1km の伝送線路がある．終端側を短絡したところ，電源側から測定したインピダンスは$0.6i$ Ωであった．一方，終端側を開放して電源側からアドミタンスを測定すると$4\text{x}10^{-6}i$ Sであった．
この伝送線路の特性インピダンスを求めよ．

Consider a transmission line with the length l = 1km. First we short-circuited the end and measured the impedance from the signal source and obtained $0.6i$ Ω. Next we opened the end and measured the admittance from the signal source and obtained $4\text{x}10^{-6}i$ S.
What is the characteristic impedance of the transmission line?

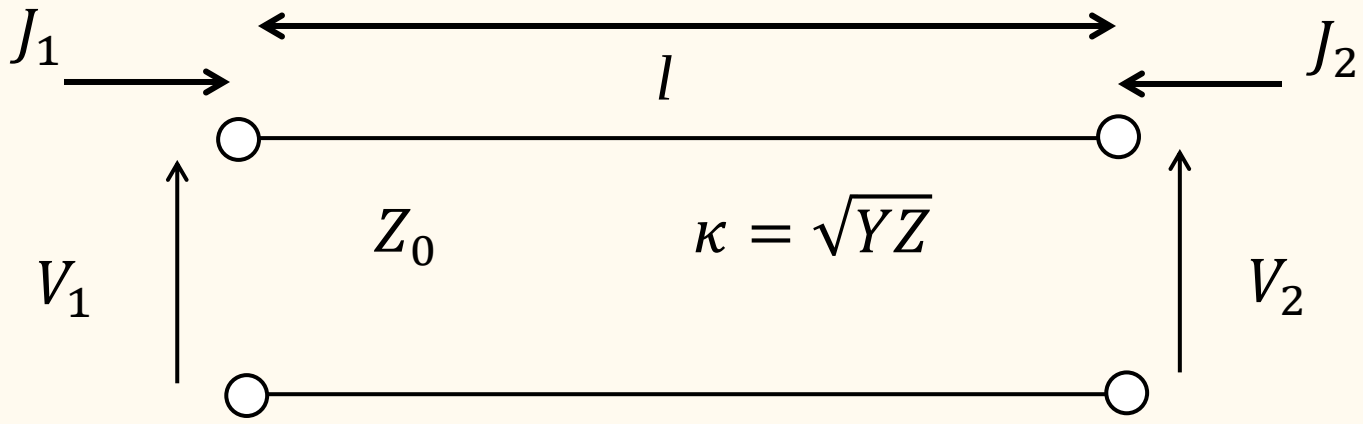
Exercise D-2



Exercise D-3



$$\begin{pmatrix} V_1 \\ J_1 \end{pmatrix} = \begin{pmatrix} A & B \\ C & D \end{pmatrix} \begin{pmatrix} V_2 \\ J_2 \end{pmatrix}$$

Remember F-matrix (cascade matrix) defined above.

Write down the F-matrix form of the transmission line shown below.