1. Find the $Z$ matrix of the two-port shown below:

![Circuit Diagram]

$R = 1 \text{ k}\Omega$

$C = 1 \text{ pF}$

2. Find a two-port matrix for the following circuits:

a. Gyrator

b. Ideal transformer

c. “Physical” transformer.

Use the Laplace ($s$) variable. Choose the matrix which is the simplest to find!