

**Special Problem II.A-19**

For a specific frequency, an **amplifier** has a scattering matrix of the form:

$$\underline{\underline{\mathbf{S}}} = \begin{pmatrix} 0.01 & 0.001 \\ 15.0 & 0.01 \end{pmatrix}$$

What is this amplifier's **gain** and **reverse isolation**??