Quiz #4
Topic: Feedback
Date: Nov. 7, 2008

Useful formulae:

Z parameters: \( V_1 = I_1Z_{11} + I_2Z_{12} \) and \( V_2 = I_1Z_{21} + I_2Z_{22} \)

**Problem 1:** Consider the series-series feedback amplifier shown in Fig. 1.

(a) Calculate the input and output loading parameters for the feedback network (\( Z_{11} \) and \( Z_{22} \)).

(b) Use the feedback loading, \( R_S \), and \( R_L \) to calculate the open-loop gain \( (A = I_o/V_S) \) for the amplifier.

![Figure 1: Series-series feedback amplifier.](image)