

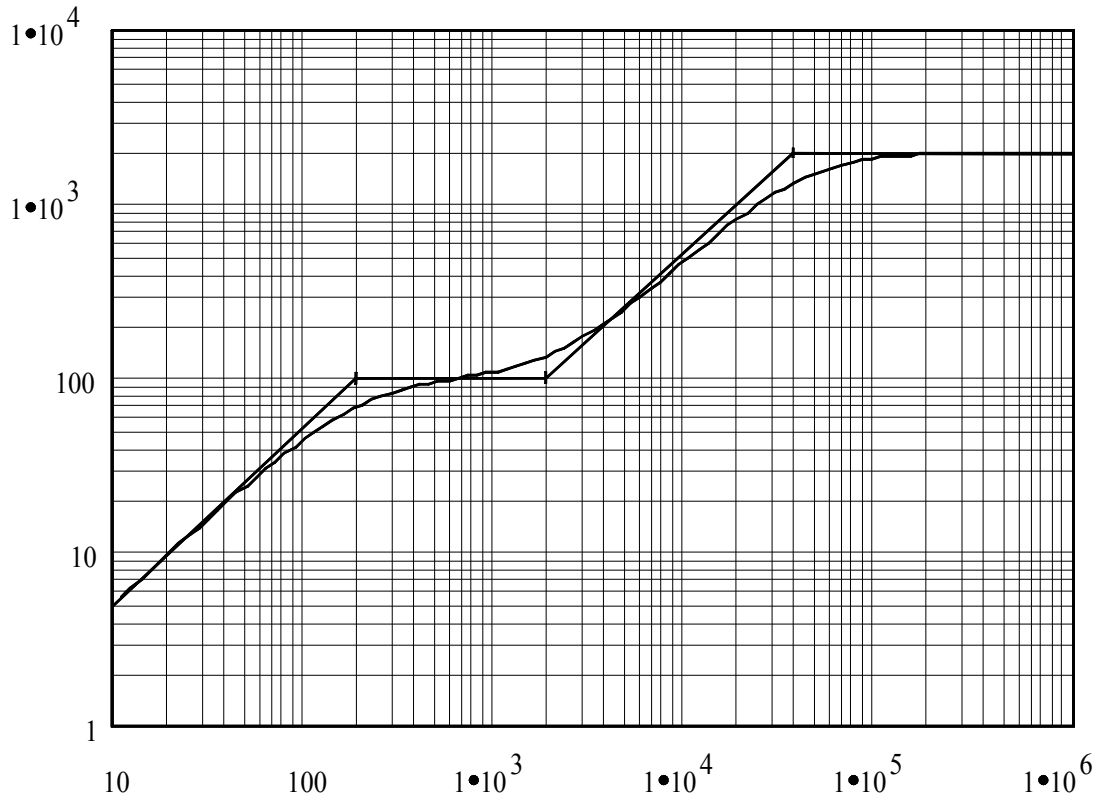
ECE 3050 Analog Electronics Quiz 8

July 8, 2009

Professor Leach Last Name: _____ First Name: _____

Instructions. Print your name in the spaces above. Place a box around any answer. **Honor Code Statement:** *I have neither given nor received help on this quiz.* Initials _____ For credit, you must give all equations that you use to calculate your answers. Credit will not be given for any answer without full supporting work.

- 1 of 2. The straight line asymptotic approximation and smooth curve for the Bode magnitude plot of a transfer function is given. The horizontal axis is the radian frequency. What is the transfer function?



$$T(s) = 100 \frac{s/200}{1 + s/200} \frac{1 + s/2000}{1 + s/4000}$$

2 of 2. Sketch the straight line approximation and smooth curve Bode magnitude plots for the transfer function

$$T(s) = 200 \frac{\frac{s}{4000} + 1}{\left(\frac{s}{400}\right)^2 + 0.4 \left(\frac{s}{400}\right) + 1}$$

Label the axes in such a way as to make best use of the 5 log cycle graph.

