

EE 475 Fall 2011 Quiz #13

Name: _____

For the Nyquist plot of a stable minimum phase system is shown on the screen, answer the following questions. Notice that the unit circle is drawn.

- Where is $w=0+$, where is $w=0-$, _____
- where is $w=+\infty$, where is $w=-\infty$, _____
- what is the system type, _____
- what is the relative order of the TF, _____
- how should you complete the nyquist plot, _____
- what are P/N/Z as in Nyquist Criterion, $P=$ _____, $N=$ _____, $Z=$ _____
- is the closed-loop system stable, _____
- what the is the phase margin, _____
- by how much can the gain be increased without affecting stability? _____
- how many gain cross-over points and how many phase cross-over points are there?
_____, _____.

The Nyquist plot and its zoom-ins are given below. Blue is positive w and red is negative w .

