

ECE470 Power Systems I Hints for HW # 8

1.
 - a) $I_{a0} = 0$, $I_{a1} = 39.1/\underline{42.8}$, $I_{a2} = 11.85/\underline{17}$
 - b) $V_{ab0} = 0$, $V_{ab1} = 195.3/\underline{6}$, $V_{ab2} = 59.3/\underline{-20}$
 - c) $I_A = 67.8/\underline{-8.6}$, $I_B = 20.5/\underline{-112.7}$, $I_C = 63.1/\underline{127}$

2. The transformer's voltages all line-up with the generator's base voltages and all equipment is rated 200 MVA, so no pu numbers have to be changed.

3. $X_1 = 0.2618$, $X_2 = 0.2317$, $X_0 = 0.56$

4.

i)	1.43 kA	154 kV
ii)	1.92 kA	
iii)	1.76 kA	62.3 kV
iv)	1.82 kA	153 kV