Week 6 Assignment 6

Due: 02/20/04 at 11:59 PM

Common data for Questions 1 to 11:
Two transformers have a ratio of 1:1 and can handle a 120 V, 60 Hz load. The two transformers have a loss of 2% and 3% respectively. The transformer losses are included in the solution of the equations.

1. What should be the value of the total resistance of the 120 V 60Hz transformer (in ohms) referred to the 120 V side?

2. What should be the value of the total leakage resistance of the 120 V 60Hz transformer (in ohms) referred to the 120 V side?

3. Two 120V, 60Hz transformers with taps 2240V and 6440V are used as in parallel. The two transformers have a ratio of 1:1 and can handle a 60 Hz load. The two transformers have a loss of 2% and 3% respectively. What is the equivalent transformer resistance referred to the 120 V side?